



**US Army Corps
of Engineers**

Construction Engineering
Research Laboratory

CERL Special Report 99/53
June 1999

Technical Review of the Economic Development Conveyance for Red River Army Depot, Texas

Jeffrey J. Bogg, Michael Rubenacker, Samuel L. Hunter, Jane E. DeRose, William Cork, Ted Lyman,
Vince Amatangelo, and Tim Smith

19990830 109

In 1993 President Clinton requested that Congress provide new authority to expedite the reuse of military bases adversely affected by Base Realignment and Closure (BRAC) actions. The result was a new property transfer method, called an Economic Development Conveyance (EDC), which gives greater flexibility to the Department of Defense (DoD) and affected communities to negotiate a mutually beneficial property transfer.

On 6 January 1998, the Bowie County/Red River Local Redevelopment Authority filed an EDC application for transfer of portions of the Red River Army Depot, a U.S. Army installation slated for realignment under BRAC 95. The U.S. Army Construction Engineering Research Laboratory was tasked by Headquarters, U.S. Army Corps of Engineers to (1) review the EDC application for compliance with DoD rules implementing the Federal EDC policy, (2) analyze the findings, and (3) report to the sponsor.

The contents of this report are not to be used for advertising, publication, or promotional purposes. Citation of trade names does not constitute an official endorsement or approval of the use of such commercial products. The findings of this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

DESTROY THIS REPORT WHEN IT IS NO LONGER NEEDED

DO NOT RETURN IT TO THE ORIGINATOR

USER EVALUATION OF REPORT

REFERENCE: CERL Special Report 99/53, *Technical Review of the Economic Development Conveyance for Red River Army Depot, Texas*

Please take a few minutes to answer the questions below, tear out this sheet, and return it to USACERL. As user of this report, your customer comments will provide USACERL with information essential for improving future reports.

1. Does this report satisfy a need? (Comment on purpose, related project, or other area of interest for which report will be used.)

2. How, specifically, is the report being used? (Information source, design data or procedure, management procedure, source of ideas, etc.)

3. Has the information in this report led to any quantitative savings as far as manhours/contract dollars saved, operating costs avoided, efficiencies achieved, etc.? If so, please elaborate.

4. What is your evaluation of this report in the following areas?

a. Presentation: _____

b. Completeness: _____

c. Easy to Understand: _____

d. Easy to Implement: _____

e. Adequate Reference Material: _____

f. Relates to Area of Interest: _____

g. Did the report meet your expectations? _____

h. Does the report raise unanswered questions? _____

i. General Comments. (Indicate what you think should be changed to make this report and future reports of this type more responsive to your needs, more usable, improve readability, etc.)

5. If you would like to be contacted by the personnel who prepared this report to raise specific questions or discuss the topic, please fill in the following information.

Name: _____

Telephone Number: _____

Organization Address: _____

6. Please mail the completed form to:

Department of the Army
CONSTRUCTION ENGINEERING RESEARCH LABORATORY
ATTN: CECER-TR-I
P.O. Box 9005
Champaign, IL 61826-9005

REPORT DOCUMENTATION PAGE

*Form Approved
OMB No. 0704-0188*

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave Blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED	
	June 1999	Final	
4. TITLE AND SUBTITLE Technical Review of the Economic Development Conveyance for Red River Army Depot, Texas			5. FUNDING NUMBERS MIPR 8ACERB3003
6. AUTHOR(S) Jeffrey J. Bogg, Michael Rubenacker, Samuel L. Hunter, Jane E. DeRose, William Cork, Ted Lyman, Vince Amatangelo, and Tim Smith			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Construction Engineering Research Laboratory (CERL) P.O. Box 9005 Champaign, IL 61826-9005		8. PERFORMING ORGANIZATION REPORT NUMBER SR 99/53	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) Headquarters, U.S. Army Corps of Engineers (HQUSACE) ATTN: CERE-C 20 Massachusetts Avenue, NW. Washington, DC 20314-1000		10. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES Copies are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.			
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.		12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) In 1993 President Clinton requested that Congress provide new authority to expedite the reuse of military bases adversely affected by Base Realignment and Closure (BRAC) actions. The result was a new property transfer method, called an Economic Development Conveyance (EDC), which gives greater flexibility to the Department of Defense (DoD) and affected communities to negotiate a mutually beneficial property transfer. On 6 January 1998, the Bowie County/Red River Local Redevelopment Authority filed an EDC application for transfer of portions of the Red River Army Depot, a U.S. Army installation slated for realignment under BRAC 95. The U.S. Army Construction Engineering Research Laboratory was tasked by Headquarters, U.S. Army Corps of Engineers to (1) review the EDC application for compliance with DoD rules implementing the Federal EDC policy, (2) analyze the findings, and (3) report to the sponsor.			
14. SUBJECT TERMS Base Realignment and Closure (BRAC) Economic Development Conveyance (EDC) property transfer			15. NUMBER OF PAGES 140
			16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT SAR

Executive Summary

Adverse Economic Impact of the Closure on the Region and the Potential for Recovery After the EDC (Chapter 1)

The economic analysis presented in the Economic Development Conveyance (EDC) Application describes the impact attributable to the closure of Red River Army Depot (RRAD) and discusses the potential for economic recovery after the EDC for a five-county region of influence in Texas and Arkansas. CERL found the general methodology used to assess impacts was sound and that the supporting research was thorough. However, CERL found that, in some cases, the Bowie County/Red River Local Redevelopment Authority (LRA) used questionable assumptions that affected their estimates and slightly overstated the economic impacts on the region.

First CERL questions the use of an employment multiplier of 2.97 based on private sector “transportation related industries (not including automobiles)” instead of the more appropriate “military industry” multiplier (1.49) for determining the loss of indirect jobs. This difference in multipliers substantially reduces projected indirect job loss from 2,152 to 540. In addition, the LRA’s sales multiplier of 1.97 is relatively high. Based on the types of goods purchased and the amount that is purchased locally, CERL estimates that the multiplier is closer to 1.43. This difference in multipliers may relate to the LRA using a national multiplier rather than one derived from a model specifically for the five-county region, such as that used by CERL. This difference translates to a sales impact of some \$47.6 million under the CERL scenario vs. \$57.0 million by the LRA.

Finally, the LRA assertion that the local economy is growing in all sectors is highly inaccurate, fails to give consideration to the economic context of the RRAD downsizing, and gives no indication of how the region is performing in relation to the rest of the country. With data collected and analyzed from the five-county regional economy, CERL concludes that the five-county region is weak in nearly every sector when compared with the national economy and that wages are less than 80 percent of the national average.

Overall, CERL finds that, while LRA estimates are reasonable and based on a sound methodological approach, they may slightly overstate Base Realignment and Closure (BRAC) impacts. The CERL analysis, however, suggests that the differences between the results are reasonable, and that both views demonstrate significant adverse economic impact to the region as a result of the closure. Indeed, the relatively optimistic picture painted by the LRA with respect to regional prospects for recovery may overstate the economic reality. The closure and the economic context associated with it (the pre-closure downsizing impacts and the stagnant economy) will have lasting effects on the region. The region's economic resilience has important implications for its capacity to both absorb job losses and create new jobs.

Extent of Long-Term Job Creation (Chapter 2)

To determine the timing and extent of job creation, both the LRA and CERL relied on job creation estimates derived from a combination of real estate market absorption estimates and employment density ratios for those properties absorbed. CERL's estimate also used several assumptions:

1. Agriboard would produce 250 short-term jobs in Buildings 333 and 312 (classified as manufacturing space).
2. Urban Land Institute (ULI) employment density ratios were used to compute direct employment.
3. Indirect employment estimates were generated using industry multipliers supplied by IMPLAN.
4. The real estate absorption rates used match those presented in Chapter 4 of this report.

The methodology for projecting job creation described above depends on accurately projecting how much and what kind of space will be absorbed and developing reasonable baselines for each employee per square foot of space. Therefore, CERL computed job creation estimates using historical employment trends and then computed an allocation for RRAD. In addition, CERL explored other quantitative and qualitative indicators of economic health.

CERL generated independent job creation estimates using employment data. The advantage of this approach is that it allows longer term employment trends

to be incorporated into the analysis since available data date back much further – the data used by CERL began in 1969.

ICF Kaiser International, Inc. built an independent model for CERL to forecast regional growth, then broke down these estimates by subregion to determine what share of the growth RRAD could reasonably expect to capture. To make the forecasts comparable to LRA's estimates, CERL aggregated industry employment data by the type of space that firms in each industrial category would occupy for the five-county region as a whole. For example, all manufacturing was classified as "industrial" and wholesale trade fell under "warehouse." Once aggregated, projections for each class of industry were made based on growth trends from 1969 to 1996. To estimate what share of regional growth the RRAD project could be expected to capture, the regional employment projections were adjusted to reflect Cass County's share of the regional employment for each class of industry. The resulting total of both direct and indirect jobs was 2,922 over the 15-yr redevelopment period. Using the real estate absorption/employment density method, the LRA total employment result (including direct and indirect jobs) was 2,945 jobs over the 15-yr redevelopment period. While these results are strikingly similar, swift conclusions should not be drawn from such congruity. For example, the ICF Kaiser model reflects a net loss of manufacturing jobs attributable to RRAD and the immediate vicinity when a major focus of the planned absorption and job creation at the Depot will be in manufacturing jobs.

CERL finds that the LRA has produced defensible job creation estimates based on the successful implementation of their reuse plan. From its expanded investigation, CERL concludes that the prospects for economic recovery are good; however, the community will face substantial challenges and competitive disadvantages in their reuse process. These challenges are significant enough to warrant special consideration by Army decision-makers. The region's capacity to generate jobs is severely limited by its relatively weak economic foundation, a factor that may be incorporated into the ultimate EDC negotiation in justification for discounts from fair market value (FMV).

EDC Application's Consistency With the Overall Redevelopment Plan (Chapter 3)

The RRAD reuse process began in January 1996 and was completed and approved in June 1997. Instead of submitting a separate EDC Application package that conformed to the application format outlined in the regulations and in the implementing guidance, the LRA submitted their reuse plan and an expanded business and operational plan as their EDC Application. The business and

operational plan, which includes detailed accounting of the marketing and implementation strategies, is also consistent with the reuse plan with the following notable exceptions:

- The application fails to adequately address either a definitive transition plan to third party providers or a defensible operations plan by the LRA for the utility systems. As a result, CERL was directed to defer financial analysis of the utilities transfer and proceed with a technical analysis of the EDC application using the assumption that long-term, high-quality utility service would persist for current and future users of RRAD.
- Section 2.7 (A)(1) identifies changes from the reuse plan with respect to the plan's parcelization strategy.
- On 3 August 1998, the LRA submitted an amendment to the EDC Application. This amendment was produced in response to the discovery, after the January 1998 EDC Application submittal, of regulated wetlands in the planned new development area on the western end of the EDC parcel. The discovery of the regulated wetlands was unanticipated and an obvious constraint to the intended reuse plan. The LRA proposed a wetlands mitigation strategy involving the development of the site as proposed with careful study, planning, and mitigation permitting/resolution accomplished as the redevelopment process moves forward.

Business Plan Review and Market and Financial Feasibility Analysis (Chapter 4)

The LRA is requesting an EDC to acquire approximately 770 acres of RRAD. The LRA is proposing a no-cost conveyance based on the range of negative present values of their discounted cash flow analysis. The EDC parcels are unencumbered and contiguous based on a consolidated plan. A dispersed plan was considered less efficient by the LRA, given the continuing mission of RRAD under this realignment. Under the consolidated plan, the LRA will lease back, at no cost, the facilities the Army needs. The LRA also feels this plan provides them with larger, more marketable parcels for industries most likely to locate at Red River. The 98 significant buildings (not including very small buildings, sheds, utility pump stations, etc.) contain approximately 917,000 square feet (SF) of total floor space. Almost 18 percent (169,000 SF) will be occupied by the Army under the lease-back arrangement. It is anticipated that nearly 12 percent (106,276 SF) will eventually be demolished by the LRA. No surplus

property has been or is being considered for public benefit conveyance, negotiated sale, or public sale.

The LRA Business Plan (in the EDC Application) discusses the net present value (NPV) of the discounted cash flow and the estimated FMV of the business plan. The EDC Application states that the analysis summarizes annual revenues, operating/maintenance expenses, and capital expenditures to determine a valuation for the business plan. CERL believes that the LRA made two analytical errors in their analysis. First, the LRA fully recognizes the costs of the capital expenditures in the year they are made and, second, they make no attempt to calculate a reversion value of any stabilized and continuing revenue sources at the end of the business plan projection period. Based on this flawed methodology, the LRA presents valuations based on three risk scenarios. By varying the discount rate used, they calculate values at 8 percent for a low-risk scenario and come to a valuation of *negative* \$1.5 million. At a moderate-risk level they use 13 percent and value their business plan at *negative* \$2.5 million. Finally, they present a high-risk scenario by using a discount rate of 18 percent and a value of *negative* \$2.8 million. While the LRA has gone through the process of presenting information to determine these valuations (*negative* \$1.5 million to *negative* \$2.8 million), they do not present any final determination of the valuation of their application. They appear, however, to argue for a zero cost EDC. Correcting for these methodological errors, CERL has calculated an NPV of annual cash flow increase from *negative* \$2.8 million to *positive* \$1.2 million using a discount rate of 18 percent, from *negative* \$2.5 million to *positive* \$1.3 million at 13 percent, and from *negative* \$1.5 million to *positive* \$1.5 million at 8 percent.

CERL developed two alternate scenarios based on information obtained during its review of the LRA's Business Plan and its market analysis, site visit, and discussions with local real estate brokers who are familiar with both the Depot site and the local market. Also, subsequent events related to the sale of the combined maintenance facility (CMF) buildings, removal of the utility systems from the EDC, and the discovery of regulated wetlands were included in the analysis and valuation.

The CERL1 scenario was developed using the following assumptions:

1. The LRA's revenue assumptions are adjusted to reflect the removal of the utility system from consideration in the EDC Application and include the sale (instead of lease) of the CMF buildings.
2. CERL-developed infrastructure costs were used instead of the LRA-developed costs. Infrastructure costs also reflect the removal of utility improvements

and the addition of the delineation and full mitigation of the wetlands area. Infrastructure costs developed by CERL are \$18.7 million versus \$22.2 million developed by the LRA.

3. The discounted cash flow analysis was corrected to reflect the proper treatment of the capital expenditures costs as outlined above. CERL also included a reversion value by capitalizing the business plan stabilized and continuing Net Operating Income (NOI) at the end of Year 15.

The CERL2 scenario uses the same assumptions as detailed above, except that only the costs for a partial wetlands mitigation are included in the infrastructure costs. CERL finds that the NPV of the business plan as proposed by the LRA and adjusted by CERL ranges from \$1.5 million to \$1.8 million. The values for the CERL1 scenario range from \$1.1 million to \$1.3 million and, for the CERL2 scenario, from \$1.42 million to \$1.49 million.

CERL finds that, under all scenarios — from the recast of the LRA's Business Plan to both CERL-developed scenarios — the reuse plan as developed by the LRA and subsequently amended has significant value and is financially feasible. The LRA has obtained a major commitment from Bowie County and, to a limited extent, the State of Texas to fund the infrastructure as needed to accommodate the reuse plan. The LRA has spent considerable time and effort to develop a plan that takes advantage of the physical, locational, and market advantages of the Depot. Moreover, they can achieve a significant start in their redevelopment with the successful sale of the CMF buildings, which represent a major portion of the square footage to be redeveloped at the Depot. This sale would provide early cash flow and a substantial occupant to help in future marketing and development.

Need and Extent of Proposed Infrastructure Improvements (Chapter 5)

In its EDC Application, the LRA proposes a capital improvement program estimated at approximately \$17 million. This amount is adjusted from the Reuse Plan due to the inclusion of estimates to mitigate a wetlands issue that was discovered subsequent to the submission of the EDC Application. CERL's independent cost assessment suggests that estimated costs will range from \$15 million to \$17 million for the scope of work proposed by the LRA; and from \$14 million to \$17 million based on the need and extent scenario determined by the CERL engineering team. Therefore, the costs presented by the LRA are found to be within CERL's ranges of cost reasonableness.

Extent of State and Local Investment and Risk (Chapter 6)

The level of investment and scope of redevelopment observed at RRAD are substantial. The LRA has outlined an investment strategy that soundly accommodates job creation goals while simultaneously reducing operating and infrastructure investment risks. CERL's scenarios suggest that the business plan is financially feasible and that sufficient revenues are available to provide consideration to the Army for the property. This fact alone suggests that the extent of state and local investment — as well as the management approach to the project — should be looked upon favorably by the Army in considering this application.

Local and Regional Real Estate Market Conditions (Chapter 7)

The RRAD EDC Application and Comprehensive Reuse Plan relied heavily on real estate market analysis provided by The Appraisal Group of Texarkana, Texas, and RKG Associates, Inc. Independent data about the real estate market were difficult to collect because the region is not subject to public sale price disclosure requirements. Therefore, CERL relied heavily on interviews with The Appraisal Group and RKG representatives to validate their methodology and on discussions with local real estate brokers, business people, and community staff and officials. In addition, CERL conducted a cursory tour of the region in an effort to evaluate the extent of the real estate market and to observe market comparables in their geographic context. The Appraisal Group and RKG Associates produced the real estate market analysis for the region. The primary sources of information for this market research were the Texarkana Chamber of Commerce, a survey of nearly 500 Texarkana businesses, and interviews with various residential and commercial real estate brokers, economic development professionals, and elected officials throughout the region. Most of the data presented relate to Bowie County, as very little data existed for surrounding counties (e.g., Miller and Little River counties in Arkansas, and Red River and Cass counties in Texas). Those counties lack any development activity. It should also be noted that no market analysis was done on the golf course.

The EDC Application contemplates a 15-yr development program and anticipates that approximately 627,800 SF of existing employment-generating industrial, office, retail and service, warehouse, and distribution space will be sold or leased over the forecast period. This absorption rate averages 41,800 SF per year. Additionally, 860,800 SF of new space is to be developed by the LRA or the private sector over the forecast period. This figure is an average development of new space of roughly 57,400 SF/yr over the forecast period. This 57,400 SF of annual absorption is not supported in the market research, but is attributed to

outside demand that the applicant did not attempt to estimate. Approximately 213 of the 493 acres planned for conveyance to the private sector will be sold in the projection period. This is an average rate of 14.3 acres/yr. Land absorption and values were based on the assumption that necessary infrastructure and amenities programmed under the consolidated reuse plan would be in place.

CERL concludes that the real estate market analysis approach and findings, presented by the applicant, as they relate to demand and competitive supply, are generally defensible. However, the applicant fails to adequately support their demand assumptions for absorption attributable to new construction. In addition to the absorption and sale of the existing land and buildings within the surplus property, an additional 860,800 SF of new space will be developed by the LRA or private sector developers. This assumption appears to be supported in the application by the expectation that market demand from outside the local area will drive this new development. However, the application specifically states that no market analysis was done outside of the local area. If this development indeed occurs, the applicant fails to illustrate how it could impact the absorption of existing space. However, the LRA assumes that absorption of the vacant land will occur in the later years of the development project. Therefore, CERL focused on the market feasibility and viability of the existing buildings. CERL concludes that the market for the existing RRAD buildings is sufficient to support the LRA's job creation objectives.

Army Disposal Plan, Other Federal Agency Concerns, and Other Property Disposal Authorities (Chapter 8)

As part of the EDC Application review process adopted by the BRAC office at HQUSACE and presented at a Corps of Engineers Real Estate Workshop in Denver, CO, in December 1995, CERL has been asked to defer comment on these issues to the Real Estate Directorate at HQUSACE and the Corps of Engineers, Fort Worth District. In addition, both the negotiation process leading up to the submittal of the formal EDC Application and review of the legal environment related to real and personal property are beyond the scope of CERL's technical review.

Economic Benefit to the Federal Government (Chapter 9)

The LRA proposes to underwrite approximately \$18.9 million in infrastructure costs associated with the redevelopment of RRAD. Operating costs and a portion of the capital costs are anticipated to be offset with real estate revenue, and state

and Federal grants. The LRA's anticipated return from investment is the creation of over 2,900 jobs facilitated through a quality industrial and business park. CERL's analysis concludes that the LRA has a high probability of achieving investment levels and job creation goals.

Based on the eligibility factors and criteria reviewed for this report, it is CERL's opinion that the applicant is eligible for an EDC. CERL recommends that the Army consider up to \$825,279 in facility layaway and annual M&R costs when negotiating the final terms and conditions of the conveyance. It is also CERL's recommendation that the Army look favorably upon the LRA's substantial level of investment, which will likely create over 2,900 jobs, when deciding if a discount from FMV is warranted. Finally, CERL's estimated range of business plan value is *positive* \$1.2 million to \$1.5 million, which contrasts with the LRA's offer of zero consideration. Note, however, that the LRA's ability to pay rests largely with the magnitude and timing of the Bldg. 312 and 333 sale to Agriboard.

CERL recommends the Army approve the EDC and negotiate for consideration. The Army should consider the LRA's willingness to transfer property rapidly in light of M&R cost avoidance. However, the Army should protect against the LRA's requested phasing of parcels that are not encumbered by operational or environmental issues.

Review of Application for Completeness (Chapter 10)

CERL concludes that the EDC Application submitted by the Bowie County/Red River LRA is lacking in certain substantive areas and in general was very difficult to review because the applicant failed to comply with the structure and order of the applications contents found in the regulation. Required sections on the general description of the property requested, description of intended uses, and description of the economic impact of closure on local communities were either omitted or so vaguely presented that it took considerable effort on CERL's part to compile the information. Also, the sections on the description of the financial condition of the community and the statement of how the EDC is consistent with the overall reuse plan were non-existent or so scattered that no cogent discussion was made by the LRA. Finally, no information beyond the presentation of the valuation analysis that argues for a valuation of the business plan between *negative* \$1.5 million and *negative* \$2.8 million is made to justify a discount from FMV.

Foreword

This study was conducted for the Base Realignment and Closure (BRAC) Officer, U.S. Army Corps of Engineers, and funded through the BRAC Office, Office of the Assistant Chief of Staff for Installation Management (ACSIM-DAIM-BO) under Military Interdepartmental Purchase Request No. MIPR8ACERB3003, dated 10 October 1997. The technical monitor was Gary Paterson, CERE-C.

The work was performed by the U.S. Army Construction Engineering Research Laboratory (CERL), Installations Division (CN), Business Processes Branch (CN-B), and the Facilities Division (CF), Facilities Maintenance Branch (CF-F). Dr. John T. Bandy is Division Chief (CN) and Dr. Moonja Kim is Branch Chief (CN-B). Michael Golish is Division Chief (CF), and Mark Slaughter is Branch Chief (CF-F). The CERL Project Leader was Jeff Bogg (CN-B) and the technical editor was Linda Wheatley, Information Technology Laboratory.

The following personnel wrote portions of this report: William Cork, ICF Kaiser (Economic Impact Analysis and Job Creation, Economic Benefit to the Federal Government, Extent of State and Local Investment and Risk, and Consistency with the Reuse Plan); Michael Rubenacker, ICF Kaiser (Business Plan Review and Market and Financial Feasibility); Ted Lyman, ICF Kaiser (Economic Impact Analysis and Job Creation); Gene Park, ICF Kaiser (Economic Impact Analysis and Job Creation); Vince Amatangelo, ICF Kaiser (Need and Extent of Proposed Infrastructure Improvements); Tim Smith, ICF Kaiser (Need and Extent of Proposed Infrastructure Improvements); Samuel Hunter, CF-F (Need and Extent of Proposed Infrastructure Improvements); and Jane DeRose, CN-B (Demolition and Facility Layaway/M&R).

Dr. Michael J. O'Connor is the Director of CERL.

Contents

SF 298.....	1
Executive Summary.....	2
Foreword.....	11
Introduction	19
Background	19
Objectives.....	20
Tasking and Approach	21
Units of Weight and Measure	22
1 Adverse Economic Impact of the Closure on the Region and Potential for Recovery After the EDC	25
Background	25
Methodology	25
Review of EDC Application Assumptions and Methodology	25
Adverse Impact of the Closure.....	26
<i>Key Assumptions in CERL's Independent Assessment</i>	26
<i>Findings.....</i>	27
The Regional Economy and Implications for Recovery	31
Conclusion.....	34
2 Extent of Short- and Long-Term Job Creation.....	36
Background	36
Methodology and Results.....	36
Economic Foundations.....	37
Job Creation Estimates Based on Historical Trends.....	38
Regional Capacity for Job Creation	38
<i>Human Resources</i>	39
<i>Technology</i>	40
<i>Quality of Life.....</i>	41
<i>Finance.....</i>	43
Conclusion.....	43

3 EDC Application's Consistency With the Overall Redevelopment Plan	44
4 Business Plan Review and Market and Financial Feasibility Analysis	46
Objective	46
Background	46
Market Summary	48
<i>Industrial/Warehouse and Distribution</i>	48
<i>Commercial Office Space</i>	49
<i>Residential Space</i>	49
<i>Vacant Land Sales</i>	49
<i>Findings for the Real Estate Market</i>	49
<i>LRA Revenue and Absorption Assumptions</i>	50
<i>Findings for Revenue and Absorption Assumptions</i>	52
<i>LRA Operating Expenses</i>	54
<i>Findings for Operating Expenses</i>	55
<i>LRA Infrastructure Improvement Costs</i>	55
<i>Findings for Infrastructure Improvement Costs</i>	56
<i>Summary of Cash Flow and Net Present Value</i>	56
<i>Findings for Cash Flow and NPV</i>	57
CERL-developed Scenarios	58
<i>CERL1 Scenario</i>	58
<i>CERL2 Scenario</i>	58
<i>Findings for Scenario and Sensitivity Analysis</i>	58
Financial Feasibility Analysis and Conclusion	59
5 Need and Extent of Proposed Infrastructure Improvements	60
Objectives	60
Approach	60
Background	61
Scope of LRA Proposal	63
CERL Evaluation of LRA Proposal	64
<i>Site Clearance and Preparation</i>	64
<i>Need and Extent Findings for Site Clearance and Preparation</i>	65
<i>Roads</i>	65
<i>Need and Extent Findings for Roads and Entrances/Railroad Crossings</i>	65
<i>New Entrance Signs</i>	66
<i>Need and Extent Findings for Entrance Signs</i>	67
<i>Street Lighting</i>	67
<i>Need and Extent Findings for Street Lighting</i>	67
<i>Miscellaneous Road Reconstruction</i>	67
<i>Golf Course Upgrade and Expansion</i>	68
<i>Need and Extent Findings for Golf Course Renovation</i>	68

<i>Building Demolition and Disposal</i>	69
<i>Need and Extent Findings for Building Demolition</i>	69
<i>Soft Costs</i>	70
<i>Wetlands</i>	70
<i>Need and Extent Findings for Wetlands</i>	71
Conclusions.....	71
6 Extent of State and Local Investment and Risk	72
Background	72
Approach.....	72
Operational Investment and Risk.....	72
<i>Investment</i>	72
<i>Risk</i>	73
Capital Improvements	74
<i>Investment</i>	74
<i>Adjustment for Utilities Systems</i>	75
<i>Risk</i>	75
Conclusions.....	76
7 Local and Regional Real Estate Market Conditions	77
Background	77
Site Configuration.....	77
Market Analysis	78
<i>Industrial/Warehouse and Distribution Market</i>	79
<i>Commercial Office Market</i>	80
<i>Residential Market</i>	81
<i>Golf Course</i>	82
Real Estate Market Conclusions	83
8 Army Disposal Plan	84
9 Economic Benefit to the Federal Government	85
Introduction.....	85
Conclusions.....	85
<i>Layaway and Annual M&R Cost Savings</i>	85
<i>Probable Layaway and M&R Program in the Absence of an EDC.</i>	87
Anticipated Consideration From the Conveyance.....	88
<i>Summary of LRA Proposal</i>	88
<i>CERL Recommendation</i>	88

10 Review of Application for Completeness 90

Appendix A: Operations and Business Plan Analyses..... 93

Appendix B: Technical Support for Infrastructure Improvement Cost Estimates 111

Distribution

List of Figures and Tables

Figures

1	Area map of RRAD's EDC parcel.....	23
2	Footprint of EDC parcel.....	24
1.1	Wages for the five-county region and the United States—1969 to 1995.....	34
2.1	Human Resources Index, 1990	40
2.2	Technology Index	41
2.3	Quality of Life Index, 1995	42

Tables

1.1	Overview of impacts and potential for recovery.....	28
1.2	List of industries used in calculating the multiplier for	30
1.3	Sectoral composition of the RRAD five-county region and United States.....	32
1.4	Overview of the RRAD five-county regional economy.....	32
2.1	Job creation estimates	37
4.1	Proposed EDC land uses and existing acreage and building SF	47
5.1.	LRA cost estimates for proposed infrastructure improvements.....	62
5.2	Cost comparison by infrastructure system	63
5.3	Infrastructure need and extent cost comparison	63
9.1	One-time layaway cost estimates for RRAD.....	86
9.2	Annual M&R cost estimates for RRAD	86
9.3	Likely Army layaway and M&R commitments	87
A.1	EDC building and land inventory.....	95
A.2	Absorption and revenues summary	97
A.3	Summary of capital improvements and property maintenance.....	99
A.4	Summary of debt service	101
A.5	LRA business plan pro forma summary.....	103
A.6	CERL1 Business Plan pro forma summary (full wetlands mitigation).....	105
A.7	CERL2 Business Plan pro forma summary (partial wetlands mitigation).....	107
A.8	Scenario and sensitivity analysis.....	109
B.1	SC&P-1 site clearance and preparation.....	112
B.2	SC&P-1 site clearance and preparation with revised B-30 crew.....	113

B.3	Construct access road from Highway 82 (located between Lots 2 and 3).	114
B.4	Construct Parcel 1D distributor road (from intersection of Lots 1, 2, 5 and 6 to intersection of Lots 3, 4, 7, and 8).	115
B.5	Construct Parcel 1C distributor road (along southern side of Highway 82, Lots 1, 2, and 3 to Park Drive).	116
B.6	Construction of distributor road in Parcel 1C (west of Runnels Village).	117
B.7	Construction of distributor road in Parcel 3B (LRA-proposed Texas road and the east end of Arkansas Road connection).	118
B.8	Reconstruct Texas Road (curb, gutters, and sidewalks) from main road to new military entrance.	119
B.9	Reconstruct Arkansas Road (curb, gutters, and sidewalks) from main road to end.	120
B.10	Reconstruct Main Drive (curb, gutters, and sidewalks) from main entrance to Texas Road.	121
B.11	Reconstruct Main Drive (curb, gutters, and sidewalks) from Texas Road to Arkansas Road.	122
B.12	Reconstruct Park Drive (curb, gutters, and sidewalks) from Main Drive to Golf Course maintenance facility.	123
B.13	Reconstruct Runnels Village Road (curb, gutters, and sidewalks) from Park Drive to Park Drive.	124
B.14	Reconstruct North Patrol Road (curb, gutters, and sidewalks) from eastern side of Lot 3 Parcel 1C.	125
B.15	Reconstruct road that services Buildings 312 and 333.	126
B.16	Slurry seal miscellaneous roads in main administration area.	127
B.17	Operation and maintenance for grounds.	128
B.18	Cost summary for golf course upgrade and expansion (including clubhouse renovation).	129
B.19	Upgrade Building 77 for Golf Clubhouse, furnish clubhouse, and install maintenance shed.	130
B.20	Upgrade existing 9-hole golf course.	131
B.21	Construct a 9-hole low to medium range type golf course	133
B.22	Install signage for site entrance	135
B.23	Building demolition.	136

Introduction

Background

The Bowie County/Red River Local Redevelopment Authority (LRA) was created in Bowie County, Texas, pursuant to a 1995 Base Realignment and Closure (BRAC) commission announcement that mandated a realignment of certain Red River Army Depot (RRAD) activities to other Army Depots. On 6 January 1998, the LRA made application for an Economic Development Conveyance (EDC) of the surplus parcel at RRAD.

RRAD is on Interstate 30 approximately 18 miles west of Texarkana, Texas, near the city of New Boston (see Figure 1, p 23). The EDC parcel identified by the LRA reuse plan and EDC application contains approximately 770 acres and 98 significant buildings with a total 916,977 SF of floor space. Primary access is through the installation's main entrance via an interchange off Interstate 30 just south of U.S. Highway 82. Although Hwy 82 fronts the north end of the surplus parcel, the remainder of the parcel is surrounded by the retained portion of RRAD and its contiguous neighboring installation, Lone Star Army Ammunition Plant. Figure 2 (p 24) illustrates the specific layout of the EDC parcel.

The EDC property transfer authority was created as a result of a major new policy to speed the economic recovery of communities adversely affected by military base closures or realignments. On 2 July 1993, President Clinton requested that Congress provide additional authority to expedite the reuse of closing military bases, in an effort to create new jobs and reestablish the economic base. Congress provided this new authority (commonly called the "Pryor Amendments") and subsequent amendments as Title XXIX of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 1994. The Department of Defense (DoD) recently codified the final implementing regulations for this legislation at 32 CFR 90-92, "Revitalizing Base Closure Communities." Collectively, these new rules are intended to facilitate the conveyance (transfer of military real and personal property) from the Federal Government to an approved LRA.

These new regulations created the EDC, which gives greater flexibility to the Military Departments and affected communities to negotiate the terms and

conditions of the conveyance if specified criteria are met. On 6 January 1998, the Bowie County/Red River LRA, filed an EDC application with the BRAC Office, Assistant Chief of Staff for Installation Management, Headquarters, Department of the Army, for the conveyance of the surplus parcel at RRAD. The application also included a copy of a locally approved reuse plan for the parcel.

In general, the LRA has requested an EDC for the parcel under the following terms and conditions:

1. The Army will negotiate a Memorandum of Agreement that will provide for the ultimate conveyance of all real and personal property within the identified EDC parcel and will include all utility systems and infrastructure including those systems that serve both RRAD and Lone Star Ammunition Plant. These utility systems include: water treatment and distribution, waste water treatment and collection, industrial wastewater and collection, gas system and distribution, electrical system and distribution, and telecommunications system.
2. The Army will transfer parcels of real estate on a phased basis. This phasing would be based on multiple factors including, but not limited to, environmental encumbrances, operational encumbrances, market demand, tenant placement, and financial feasibility.
3. Bowie County would assume responsibility for the maintenance and operational costs of property only following lease or conveyance of a parcel.
4. The real property will be transferred via quitclaim deed(s), which will contain legally required environmental covenants and indemnification.
5. Personal property transferred by bill of sale at no cost.

Subsequent to the receipt of the application, the Army BRAC Office tasked the U.S. Army Construction Engineering Research Laboratory (CERL) to provide a technical review of the EDC application, evaluating it for compliance with 32 CFR Part 91 and related regulations and directives. This report comprises CERL's findings and conclusions.

Objectives

The objective of this study was to technically evaluate the LRA's EDC application in terms of:

1. Validity of the information provided by the LRA
2. Completeness of the application according to the criteria and factors specified in the DoD regulations governing EDCs.

The objective of this report is to document the study's findings, noting any deficiencies found in the application, and to attempt to address those deficiencies.

Tasking and Approach

A multidisciplinary work group formed and managed through the CERL Installations Division (CN) executed the technical review of the EDC application. Upon receipt of the application, the work group conducted a site visit to RRAD and the region on 25-27 February 1998. The purpose of this site visit was to coordinate the application review with Army personnel at the Depot and to collect site specific data to independently validate the facts and assumptions presented in the LRA's application. Most of the group's analytical work and documentation occurred between 24 February and 24 April 1998 and between 11 August and 23 November 1998. The technical review was put on hold in late spring 1998 due to the discovery of regulated wetlands on the west end of the EDC parcel and due to significant policy concerns expressed by Army Staff regarding utility systems transfer, as well as parcelization and phasing of the real property.

Pursuant to an initial cursory review of the application and after conducting the site visit, the CERL work group determined that the applicant lacked sufficient supporting information and justification for inclusion of all named utility systems in the EDC application. Moreover, legal experts had some concerns as to whether there was sufficient legal authority for such a conveyance. A further concern was the long-term provision of these services and cost effectiveness of such a decision in light of the continuing Army mission at both RRAD and Lone Star Ammunition Plant. The Army received special legislation to authorize the coupling of the utility systems at Lone Star and Red River under the EDC authority in the fall of 1998. However, there was still insufficient supporting information in the EDC application to render judgment on the coupling of the utility systems to the remaining EDC property. As a result, the Army Base Transition Team directed CERL to conduct its analysis of the EDC application without incorporating consideration of conveyance of the utility systems.

Validity of the information provided on the EDC application was determined by following a protocol specifically developed to demonstrate how the substance of the application meets the criteria in the DoD implementing regulations related to EDCs. Using data provided in the EDC application and supporting documents, as well as data gathered independently by team members, CERL evaluated the application according to the following criteria and factors.

1. Adverse economic impact of the closure on the region and potential for economic recovery after an EDC
2. Extent of short- and long-term job generation
3. Consistency with the overall redevelopment plan (i.e., Comprehensive Reuse Plan for Red River Army Depot)

4. Financial feasibility of the proposed redevelopment, including market analysis, and the need and extent of proposed infrastructure improvements
5. Extent of state and local investment and risk
6. Current local and regional real estate market conditions
7. Relationship to the overall Military Department disposal plan for the installation, incorporation of other Federal agency interests and concerns, and applicability of and conflicts with other Federal property disposal authorities
8. Economic benefit to the Federal Government, including protection and maintenance cost savings and anticipated consideration from the transfer.

Another criterion to be reviewed under the EDC implementing regulations is the proposed EDC's compliance with applicable Federal, state, and local laws and regulations. This type of legal review falls beyond the scope of CERL's tasking and expertise, and is not addressed in this report.

After evaluating the validity of the information provided in the EDC application, CERL determined whether the application was complete in terms of the seven criteria specified in the EDC implementing regulations. (These criteria are discussed in Chapter 10, **Review of the Application for Completeness**.)

Finally, the CERL work group compiled its findings into this report and a briefing to the sponsor. The final briefing was given to Army decision-makers on 8 October 1998.

Units of Weight and Measure

U.S. standard units of measure are used throughout this report. A table of conversion factors for Standard International (SI) units is provided below.

SI conversion factors		
1 in.	=	2.54 cm
1 ft	=	0.305 m
1 sq ft	=	0.093 m ²
1 cu ft	=	0.028 m ³
1 mi	=	1.61 km

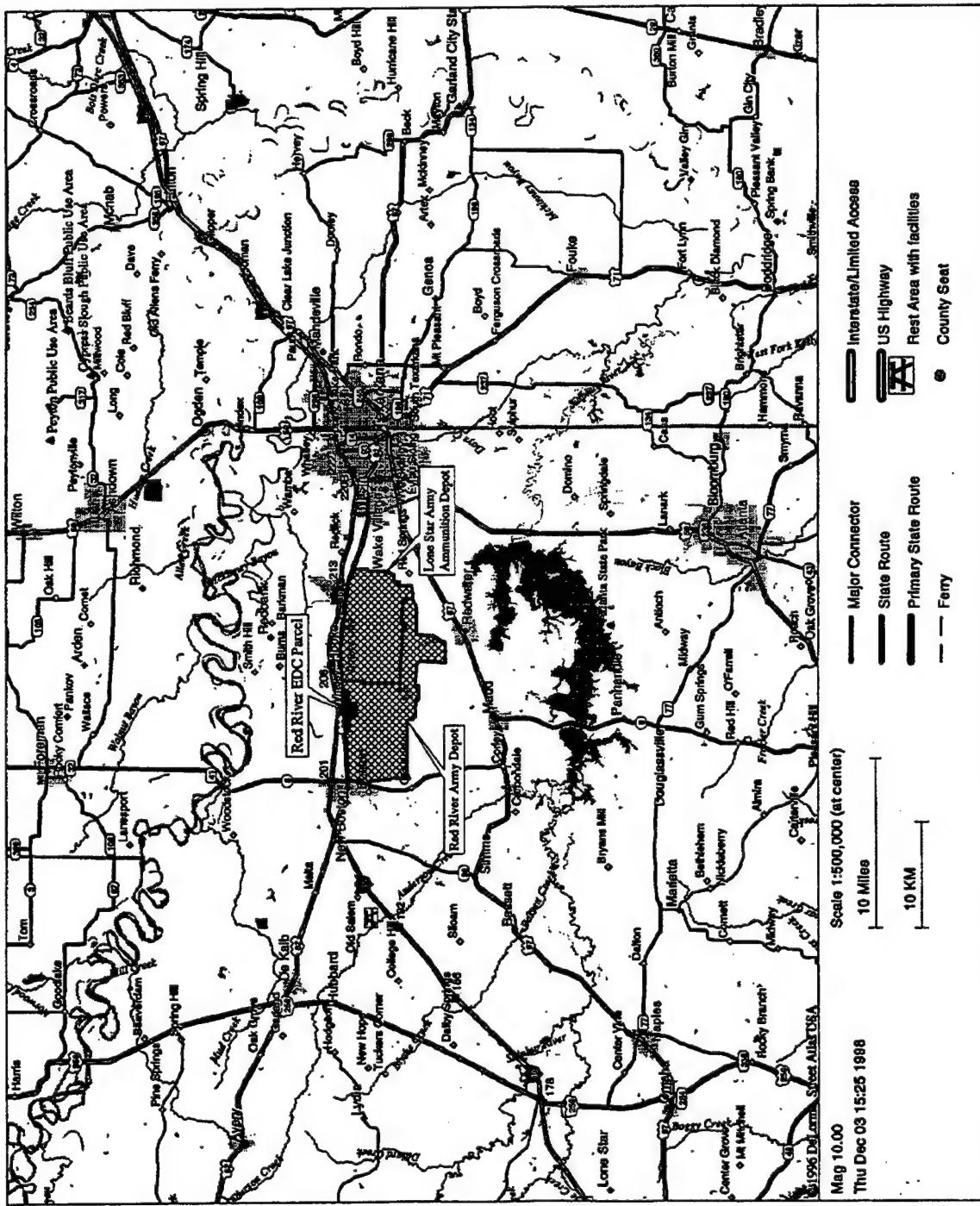


Figure 1. Area map of RRAD's EDC parcel.

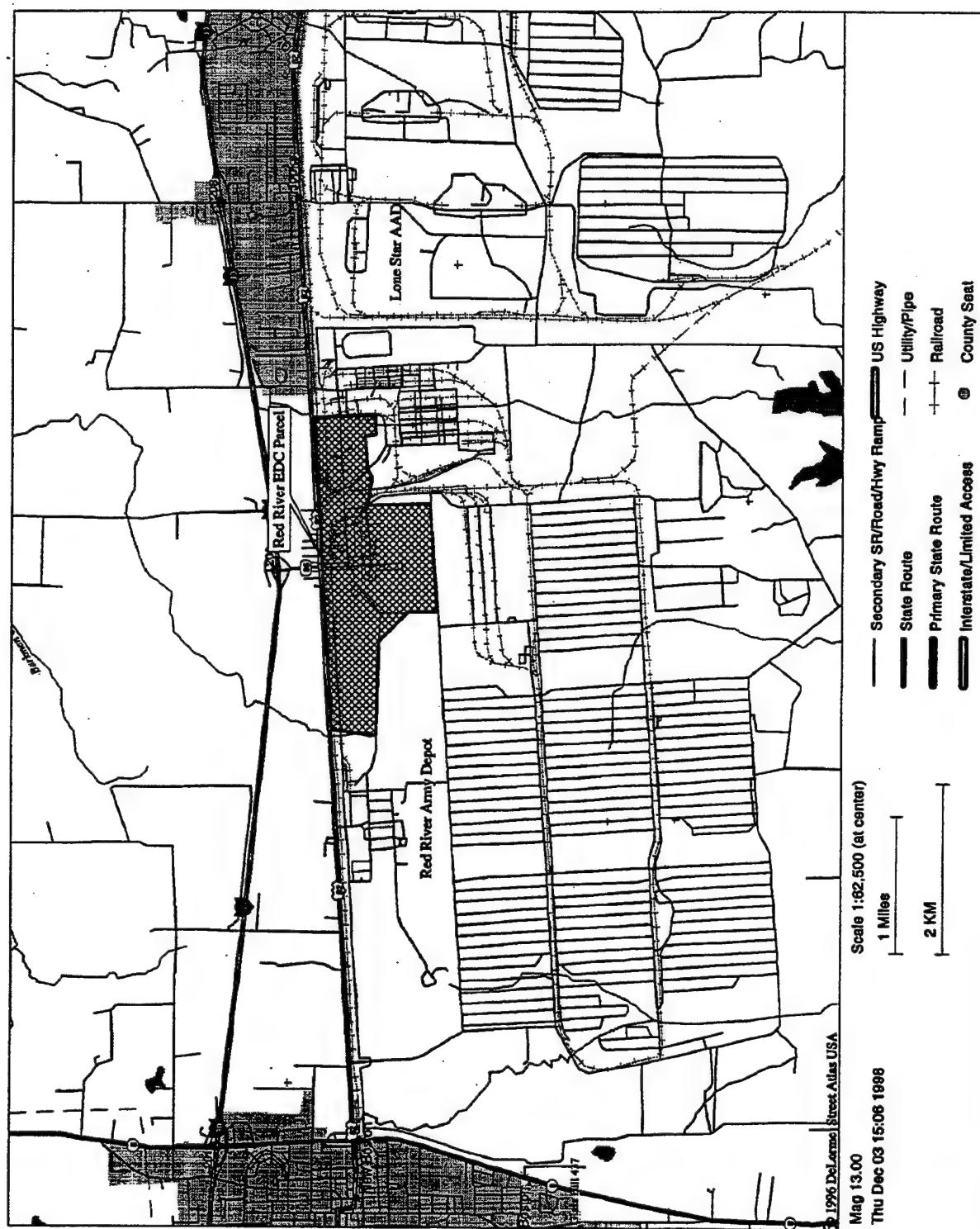


Figure 2. Footprint of EDC parcel.

1 Adverse Economic Impact of the Closure on the Region and Potential for Recovery After the EDC

Background

Pursuant to 32 CFR §175, the prescribed content of the EDC application must include a description of the economic impacts attributable to the closure and a discussion of the potential for economic recovery after the EDC. This chapter addresses these concerns and will focus on analyzing the regional economy as defined in the “Comprehensive Reuse Plan for Red River Army Depot.” The region of influence comprises Bowie, Cass, and Red River counties in Texas, and Little River and Miller counties in Arkansas.

Methodology

CERL began the process of reviewing the economic impact assessment by analyzing the “Economic Development Application for the Red River Army Depot” and supporting materials — primarily the “Comprehensive Reuse Plan for Red River Army Depot.” In reviewing this material, CERL found that the general methodology used to assess impacts was sound and that the supporting research was thorough. The methodology involved extensive local data collection, which made the analysis much richer than simple input-output modeling not adjusted to local conditions (e.g., integrating specific county and municipal tax rates, etc).

After reviewing existing material, CERL used a software program called IMPLAN Pro to generate independent job and related impact assessments. 1995 data for the five-county area was used for the input-output models.

Review of EDC Application Assumptions and Methodology

In the Red River LRA analysis, impacts were broken down into estimates for specific cities and counties. Payroll impacts were broken down based on zip code

data from the RRAD payroll office. Retail sales impacts were also broken down by each locality's share of total retail sales. In some cases, the estimated disaggregation was based on the assumption that future impacts would be allocated proportionally (e.g., future job losses would impact each community in proportion to how it was impacted in the past).

Most assumptions in the impact analysis were related to adjusting the estimated impact of downsizing on payroll. Assumptions include:

- Persons taking their retirement option will receive 50 percent of their current salary
- Early retirees will receive \$12,500 in early retirement incentives
- An unstated percentage of the laid off individuals will stay in the area; and those that stay will be reemployed at 60 percent of average RRAD salary.
- Of the 16 to 20 percent of the survey respondents who stated that they were uncertain whether they would stay in the region, the "majority" would remain in the area.

Overall, the LRA relied on data from RRAD, agencies, surveys, and other sources to drive its modeling assumptions. In some cases, however, questionable assumptions were made that affected the LRA's estimates. These specific cases will be highlighted in the following discussion.

Adverse Impact of the Closure

Key Assumptions in CERL's Independent Assessment

Much of CERL's independent analysis relied on using IMPLAN Pro to model the effects of direct and indirect employment impacts. As alluded to earlier, however, the Red River LRA study included a significant amount of local data collection and research that improved their analytic approach. Where possible, CERL used the local data (local tax rates, state education allocations, etc.) collected for the Red River LRA analysis both to make meaningful comparisons and to improve the precision of the estimates. Using this data for CERL analysis involved sharing some of the assumptions that were found to be reasonable from the original impact assessment. Key assumptions are briefly summarized below.

Retail Sales Impact Assessment

- 16.5 percent of income is disposable income that will be spent on retail goods (same assumption as the original model, which is based on average disposable income figures from a survey)
- Depot spending reduction is proportional to employee reductions (same assumption as the original model)

School Revenue Impact Assessment

- 95 percent of laid off RRAD employees are heads of household (same assumption as the original model)
- 18 percent of laid off RRAD employees will relocate from the region (based on survey estimates from the original model)
- 20 percent of members families of laid off employees represent school age children.

Findings

CERL's independent analysis finds that economic impacts on the region have generally been slightly overstated, but overall the LRA's estimates are within reason. An overview of the impact assessment from both the LRA and CERL is provided in Table 1.1.

One important finding was that significant downsizing occurred prior to the official realignment at RRAD. Between 1991 and 1992, RRAD employment dropped steeply from 4,497 to 3,195 and continued to fall steadily in subsequent years. While this downsizing was not pursuant to BRAC, it nonetheless had the potential for a real and tangible effect on the extent of the adverse impact of the realignment and the potential for the region to recover. For this reason, CERL ran an alternate scenario to look at the effects the impacts had on the region beginning in 1991. These findings are also summarized in Table 1.1.

Table 1.1. Overview of impacts and potential for recovery.

Impact	1991-1995: Downsizing not pursuant to BRAC; prior to closures	BRAC Closure Impacts as Estimated by LRA, 1994	Post-EDC CERL Projections	LRA Estimate of Potential for Recovery	CERL Estimate of Potential for Recovery
Direct Employment Impacts	Significant downsizing between 1991 prior to BRAC could be included in the analysis to capture full effects of downsizing. If this downsizing is included, the total direct job loss would be 3,179.	1,093 by end of 1997	1,093 by end of 1997	843 over 5 years; 1,355 over 10 years 1,902 over 15 years	715 over 5 years; 1,738 over 10 years 2,922 over 15 years (direct and indirect jobs created)
Indirect Employment Impacts	1,439 indirect jobs	2,152 indirect jobs	540 indirect jobs	1,043 including temporary jobs from construction	See above
Direct Payroll Impacts	\$107.2 million total	\$75.6 million	\$40.2 million	N/A	\$15.4 million over 5 years; \$37.5 million over 10 years; \$63.0 million over 15 years
Retail Sales Impacts	\$62.8 million total	\$57 million	\$47.6 million	N/A	\$6.6 million over 5 years; \$10.4 million over 10 years; \$14.6 million over 15 years (each includes impact from construction of the RRAD project)
Government Revenue Impacts (sales tax loss)	\$4.0 million	\$1.69 million	\$3.0 million	N/A	\$422,000 over 5 years; \$666,000 over 10 years; \$934,000 over 15 years
Unemployment	8.8% - 1991 9.7% - 1992	N/A	9.2% - 1994	N/A	7.6% - 1996 (actual unemployment rate)

CERL's estimates are slightly lower than those of the LRA for one primary reason — the LRA uses employment and sales multipliers that appear to be high. As shown in Table 1.1, the LRA predicts that 2,152 indirect jobs will be lost due to BRAC, while CERL estimates significantly fewer indirect jobs lost (540). The LRA uses a relatively high employment multiplier of 2.97 to estimate indirect employment effects. This multiplier (from the Bureau of Economic Analysis's RIMS II Region Input-Output) assumes that the direct job losses will all be in "transportation related industries (not including automobiles)." While much of the job loss has, and will indeed continue to be, in heavy industry and maintenance, it is unsound to use multipliers for the private sector since military procurement is not likely to be as heavily linked to the local economy. Specialized military inputs for armored personnel carriers, for example, are more likely to be purchased from national suppliers than from solely local companies. Moreover, some of the job losses are likely to be in industries with lower multipliers (e.g., storage and education).

To take into account the idiosyncrasies of military job losses, it would be more appropriate to use the multiplier specifically for the "military" industry rather than multipliers derived from private sector industries. CERL's IMPLAN analysis indicates that the total multiplier effect, including induced effect, is near 1.49 for military job losses, which substantially reduces projected indirect employment loss from 2,152 to 540. Another reason the LRA's multiplier may be higher is that it appears to be based on national input-output data. The size of the region included in the analysis makes a difference in the estimates because larger regions typically have more local industries from which to purchase intermediate goods and services; therefore, the employment multiplier effect will be greater. National data, then, will greatly overstate multiplier impacts for a small region such as the five-county area around Texarkana. Since all the other impacts (retail sales, government revenue, school district revenue) are partly derived from direct and indirect job losses, this discrepancy explains a good deal of the difference in the results from the LRA and CERL.

The multiplier that estimates reduced local Depot spending, 1.97, is also relatively high. Based on the types of goods purchased and the amount purchased locally, CERL estimates that the multiplier is closer to 1.43. This multiplier is an average of all the multipliers for industries from which the Depot is likely to have purchased goods. Table 1.2 lists those industries and multipliers used for this technical review. The new, lower multiplier reduces the effects of local Depot spending reductions, which in turn lowers the impact on retail sales and government revenue. Again, the multiplier discrepancy may be due the fact that the LRA multiplier was national rather than one derived from a model specifically for the five-county region, such as that used by CERL.

The government revenue impact estimate is the only one for which CERL predicts a greater impact. Government revenue impact is based on lost revenue from sales taxes. The LRA analysis first estimates loss of retail sales from both reduced Depot spending and lost disposable income from workers who will lose their jobs. Quite sensibly, the LRA analysis then disaggregates loss of retail sales by each city and applies each city's local sales tax rate to derive lost government tax revenue.

Table 1.2. List of industries used in calculating the multiplier for local Depot purchases.

Industry	Multiplier
Ammunition, Except for Small Arms	1.0
Apparel and Accessory Stores	1.1
Architectural Metal Work	1.1
Building Materials and Gardening	1.0
Communications, Except Radio and TV	1.4
Complete Guided Missiles	1.3
Computer and Data Processing Service	1.1
Concrete Products, N.E.C.	1.3
Electric Services	1.6
Equipment Rental and Leasing	1.4
Fabricated Metal Products, N.E.C.	1.4
Fabricated Plate Work (Boiler Shop)	1.2
Fabricated Structural Metal	1.3
Food Stores	1.0
Furniture and Home Furnishings Stores	1.1
General Merchandise Stores	1.0
Maintenance and Repair Oil and Gas	1.0
Maintenance and Repair Other Facilities	1.2
Meat Packing Plants	6.5
Metal Cans	1.7
Metal Coating and Allied Services	1.3
Metal Doors, Sash, and Trim	1.2
Miscellaneous Retail	1.1
New Farm Structures	1.4
New Highways and Streets	1.3
New Industrial and Commercial Buildings	1.4
New Residential Structures	1.4
New Utility Structures	1.3
Pipe Lines, Except Natural Gas	2.3
Pipe, Valves, and Pipe Fittings	1.2
Plating and Polishing	1.1
Prefabricated Metal Buildings	1.3
Ready-mixed Concrete	1.5
Services to Buildings	1.1
Sheet Metal Work	1.2
Structural Wood Members, N.E.C.	1.6
Transportation Equipment, N.E.C.	1.5
Transportation Services	1.4
Wood Pallets and Skids	1.4
AVERAGE	1.4

The LRA analysis, however, uses \$29.5 million as the figure for lost regional retail spending despite the fact that earlier retail sales impacts are estimated to be \$57 million. The EDC Application does not explain why the smaller sum is used or what the source might be. CERL estimates that \$47.6 million will be lost in retail sales based on earlier estimates of losses in Depot spending, indirect job losses, and payroll impacts, all of which were discussed above. The original model was rerun using CERL's estimate of lost retail sales, yielding an estimated \$3.0 million in lost government revenue.

The Regional Economy and Implications for Recovery

An important consideration in assessing the impact of RRAD downsizing is the condition of the regional economy. Naturally, a region with strong economic growth will be better able to absorb job losses while less dynamic regional economies may lack a strong industrial base to help them recover.

This consideration is discussed briefly in the "Comprehensive Reuse Plan for Red River Army Depot," Chapter Six, Target Industry Analysis. Even so, CERL finds that the picture of regional economic growth is highly inaccurate and fails to give serious consideration to the economic context of the RRAD downsizing. The original assessment stated that the local economy was growing in all sectors and that nearly 3,000 jobs had been created since 1992. First, it is untrue that all sectors are growing in terms of employment, which, for the purposes of this assessment, are paramount. Second, these statements give no indication of how the region is performing in relation to the rest of the country. While the region may be adding jobs, it may be doing so at a much slower pace than the country as a whole.

To address these issues, CERL collected and analyzed data on the five-county regional economy. Table 1.3 shows the relative sectoral makeup of both the regional and U.S. economy. In general, the sectoral composition is similar to that of the United States. Services and FIRE,* two rapidly growing sectors, account for a smaller share of total employment, while retail trade is slightly more concentrated in the five-county region.

* Finance, insurance, and real estate.

Table 1.3. Sectoral composition of the RRAD five-county region and United States.

Sector	Percent of total employment	
	Region	United States
Ag. Svc., Forestry, Fishing, and Other	1.0	1.2
Mining	0.5	0.6
Construction	6.6	5.2
Manufacturing	13.9	13.1
TCU	4.8	4.8
Wholesale Trade	4.4	4.8
Retail Trade	19.5	17.2
FIRE	4.7	7.6
Services	26.6	30.6
Federal Government	4.5	2.0
Military	0.9	1.5
State and Local	12.6	11.2
TOTAL	100.0	100.0

Source: Bureau of Economic Analysis, REIS.

Table 1.4 presents regional employment at two points in time (1991 and 1995) to show how the economy performed as it experienced the impacts of base downsizing. Also presented are the growth rates for each sector at the regional and national levels. In this context, one can clearly see that many sectors in the five-county region are growing more slowly than in the United States at large.

Table 1.4. Overview of the RRAD five-county regional economy.

Sector	1991	1995	Regional Percentage Growth (1991-95)	U.S. Percentage Growth (1991-95)	Regional Competitiveness
Ag. Svc., Forestry, Fishing and Other	674	853	26.6%	20.7%	39
Mining	441	389	-11.8%	-9.8%	(9)
Construction	5,224	5,387	3.1%	12.3%	(480)
Manufacturing	12,401	11,427	-7.9%	1.1%	(1,105)
TCU	3,900	3,969	1.8%	7.6%	(227)
Wholesale Trade	3,013	3,572	18.6%	4.9%	411
Retail Trade	13,892	16,033	15.4%	11.2%	586
FIRE	3,890	3,854	-0.9%	0.1%	(40)
Services	20,170	21,848	8.3%	13.1%	(970)
Federal Government	5,963	3,674	-38.4%	-5.3%	(1,970)
Military	873	719	-17.6%	-16.4%	(11)
State and Local	9,004	10,319	14.6%	6.1%	763
TOTAL	79,445	82,044	3.3%	7.5%	(3,331)

Source: Bureau of Economic Analysis, REIS.

"Regional Competitiveness" is the product of shiftshare analysis produced by ICF Kaiser International, Inc., which disaggregates employment growth or contraction into several parts. Specifically, the values presented here represent how the residual once growth (or contraction) is adjusted for national growth and national sectoral growth. The value can be interpreted as a measure of how competitive each industry is in the region compared to the United States.

Table 1.4 clearly shows that, despite overall employment growth, the five-county region is weak in nearly every sector of its economy. Manufacturing, the third largest sector, lost jobs between 1991 and 1995, while nationally the sector grew. Moreover, while the services sector, the region's largest, grew, it did so at a rate much slower than the U.S. sector grew. In relative terms, the only sectors performing better locally than nationally are wholesale trade, retail trade, state and local government, and agricultural services, forestry, fishing, and other. However, it is also obvious that the impact of three specific sectors (i.e., manufacturing, Federal Government, and military) heavily influences the totals of all sectors. In fact, when these sectors, which account for approximately 25 percent of the total, are removed from the analysis, the five-county region actually outperforms the national economy on a percentage basis, increasing 10 percent vs. 7.5 percent over the period studied. When manufacturing is left in the analysis and only the Federal Government and military are removed from the analysis, the five-county region performs at 92 percent of the national level. At best, it is difficult to reach a definitive conclusion on the strength or weakness of the regional economy based on a sectoral analysis.

Wage trends are another important indicator of a region's economic strength. As a recent empirical study found,* high wages are positively correlated with economic prosperity since, naturally, dynamic areas tend to have a concentration of industries that demand highly skilled and highly compensated workers. Figure 1.1 shows the average wages for the five-county region and the United States.[†]

* *America's Regions in the Global Economy: A New Framework for Metropolitan Economic Strategy*, ICF Kaiser, May 1998.

† Bureau of Economic Analysis, REIS.

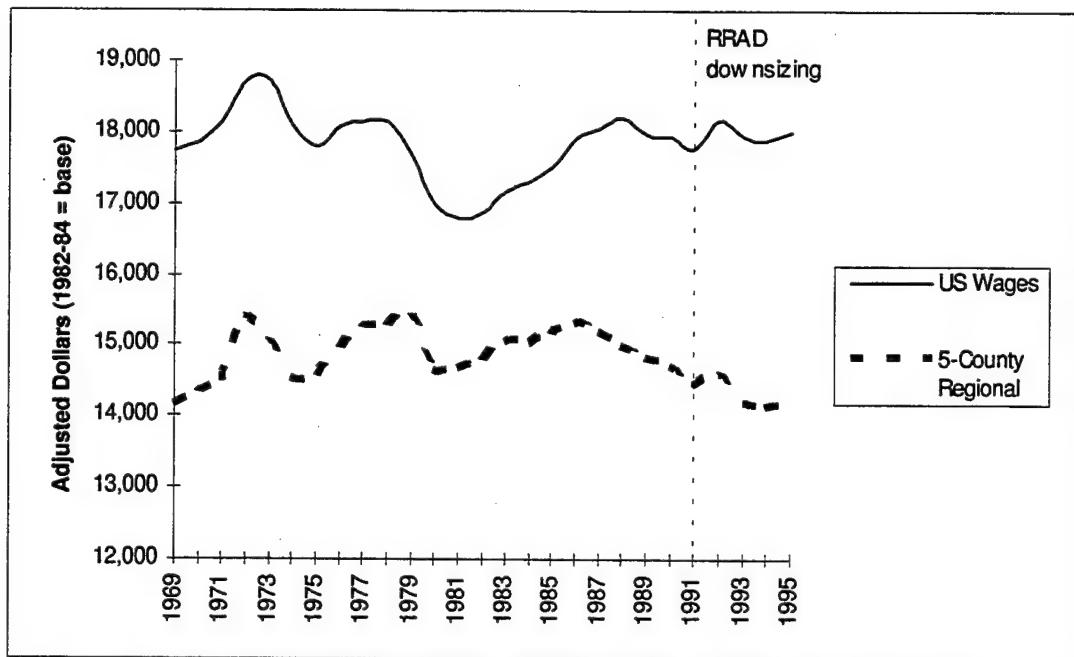


Figure 1.1. Wages for the five-county region and the United States—1969 to 1995.

Again, the conclusion is that the regional economy is relatively stagnant. In 1995, wages in the five-county region were less than 80 percent of the national average. Moreover, there is little sign that wages are moving in the direction of the national average. From 1991 to 1995, while the nation as a whole experienced positive wage growth, wages declined in the five-county region.

The economic context presented in this section suggests that, contrary to the picture presented by the original assessment, the five-county regional economy in relative terms is far from robust, casting some doubt on the region's capacity to absorb job losses and suggesting that job creation potential may be difficult. Chapter 2 discusses more fully the region's prospects for job creation, and specifically estimates the extent to which a proposed project at RRAD will create jobs. The findings from this analysis were presented in Table 1.1 to show how the potential for recovery compares with the BRAC impacts.

Conclusion

Overall, CERL finds that, while the Red River LRA estimates are reasonable and based on a sound methodological approach, they may slightly overstate BRAC impacts. The CERL analysis, however, suggests that the LRA has presented a compelling message, that differences between the results are reasonable, and that both views demonstrate significant adverse economic impact to the region as a result of the closure. Indeed, the relatively optimistic picture painted by the

LRA with respect to their prospects for recovery may overstate the economic reality facing the region. The economic context associated with the closure (the pre-closure downsizing impacts and the stagnant economy) in conjunction with the closure will have lasting effects on the region. The region's economic resilience has important implications for its capacity to both absorb job losses and create new jobs, an issue that is discussed more fully in Chapter 2.

2 Extent of Short- and Long-Term Job Creation

Background

The EDC is a jobs-centered property disposal authority that provides for greater flexibility in negotiating the terms and conditions of surplus military property transfers when such authority can better facilitate the creation of jobs for the distressed community. Both Federal regulation and DoD guidance emphasize the need for the Military Departments to adequately consider the job creation potential of the proposed redevelopment as a condition of EDC approval. This chapter will present the short- and long-term job creation opportunities that are possible with the successful implementation of the reuse plan in conjunction with EDC approval.

Methodology and Results

Historically, both the EDC applicant and CERL have relied on job creation estimates derived from a combination of real estate market absorption estimates and employment density ratios for those properties absorbed to determine the timing and extent of job creation. In the case of this EDC application, the LRA has presented job creation estimates using this method. CERL also estimated long-term job creation in this way using several assumptions:

- Agriboard would produce 250 short-term jobs in Buildings 333 and 312 (classified as manufacturing space).
- Urban Land Institute employment density ratios were used to compute direct employment.
- Indirect employment estimates were generated using industry multipliers supplied by IMPLAN.
- The real estate absorption rates used match those presented in Chapter 4 of this report.

Table 2.1 represents the results of the LRA and CERL creation estimates using the real estate absorption/employment density method. CERL finds that the LRA has produced defensible job creation estimates based on the successful implementation of their reuse plan.

Table 2.1. Job creation estimates.

Type of Use	Total SF Absorbed	LRA Estimates		CERL Estimates		Indirect Multipliers from IMPLAN	Indirect Jobs
		Jobs	Employment Densities	Employment Densities from ULI	Direct Jobs		
Heavy Industrial (Agriboard Bldgs)	52,779 345,563	83 546	633.3 633.3	633.3 1382.3	83 250	1.19 1.19	99 298
Bus/Light Industrial	265,411	381	696.6	1015.1	261	1.54	403
Office/Retail/Svc	284,380	365	779.1	467.3	609	0.35	213
Warehouse/Storage	509,773	527	967.3	2981.1	171	1.19	203
Total SF	1,457,906						
Direct Jobs		1902			1374		
Construction/Indirect Jobs		1043					1216
Total Employment		2945					2590

Economic Foundations

The methodology for projecting job creation described in the previous section depends on (1) accurately projecting how much and what kind of space will be absorbed and (2) developing reasonable baselines for each employee per square foot of space. There are those instances where clearly speculative real estate development is a market maker (i.e., Disney World in the swamps of Florida). However, most real estate analysts would argue that the real estate market is more complex and a "build it and they will come" philosophy has bankrupted many a real estate venture. Indeed, it could also be argued that employment projections based on real estate absorption estimates for existing space alone are limited by the same theoretical challenge. During formal interviews with the LRA and RRAD installation officials, CERL was urged to examine the regional economic context and explore the possibility that, despite locational advantages (adjacent to an interstate and within an MSA), RRAD could suffer from redevelopment constraints observed in more "rural" locales. Therefore, CERL computed job creation estimates using historical employment trends and then computed a share allocation for RRAD. In addition, CERL explored other quantitative and qualitative indicators of economic health. From this expanded investigation, CERL concludes that the prospects for economic recovery are good; however, the community will face substantial challenges and competitive disadvantages in

their reuse process. These challenges are significant enough to warrant special consideration by Army decision-makers.

Job Creation Estimates Based on Historical Trends

CERL generated independent job creation estimates using employment data. The advantage of this approach is that it allows longer term employment trends to be incorporated into the analysis since available data goes back much further in time — the data used by CERL begins in 1969.

ICF Kaiser International, Inc. built an independent model for CERL to forecast regional growth, then broke these estimates down by subregion to determine what share of this growth RRAD project could reasonably expect to capture. To make the forecasts comparable to the Red River LRA's estimates, industry employment data were aggregated by the type of space that firms in each industrial category would occupy for the five-county region as a whole. All manufacturing was classified as "industrial"; wholesale trade fell under "warehouse," etc. Once aggregated, projections for each class of industries were made based on growth trends from 1969 to 1996. To estimate what share of regional growth the RRAD project could reasonably be expected to capture, the regional employment projections were adjusted to reflect Cass County's share of the regional employment for each class of industries. The resulting total of jobs (both direct and indirect employment) was 2,922 over the 15-yr redevelopment period. Using the real estate absorption/employment density method, the LRA total employment result (including direct and indirect jobs) was 2,945 jobs over the 15-yr redevelopment period. While these results are similar, it is difficult to draw swift conclusions from such congruity. For example, the ICF Kaiser model reflects a net loss of manufacturing jobs attributable to RRAD and the immediate vicinity when a major focus of the planned absorption and job creation at the Depot will be in manufacturing jobs. What the results do provide, however, is an increased sense of confidence in the propensity of this region to continue to create jobs at the level contemplated in the reuse plan.

Regional Capacity for Job Creation

Ultimately, job creation depends on a region's capacity to generate jobs, a consideration that is difficult to incorporate into forecasts. Recent empirical work by ICF Kaiser International, Inc. for the U.S. Department of Housing and Urban Development looking at all 315 Metropolitan Statistical Areas (MSAs) has found that a region's capacity to improve its economic prosperity can be measured

through a variety of indicators, which together are known as "economic foundations." Moreover, these economic foundations are strongly correlated with job, wage, and output growth. Based on the data compiled for this research, ICF Kaiser presents the economic foundation scores for the Texarkana MSA (Bowie County in Texas and Miller County in Arkansas) and explains their significance in understanding the region's job creation potential. Although the five-county region was defined in Chapter 1 as the region of influence, the discussion of economic foundations is limited to the Texarkana MSA due to limited data availability. Nonetheless, this shortcoming is very minor since job creation is overwhelmingly concentrated in MSAs, accounting for 86 percent of all U.S. job growth between 1975 and 1996.

The concept of economic foundations is a relatively new approach to understanding why some regions are able to generate new jobs, increase their wages, and stimulate industrial output, while others cannot. Recent empirical work has shown that four sets of economic foundations (human resources, technology, finance, and quality of life) are critical to understanding a region's capacity to generate jobs and boost wages. While job creation estimates are important in understanding how specific projects might offset the impacts of job losses in a region, economic foundations give a broad view of the region's overall capacity to generate jobs. Regions with weak economic foundations will be less likely to replace lost jobs, and the efficacy of job creation projects such as the proposed RRAD development depend on these foundations.

This section gives an overview of the relative strength of the Texarkana MSA's economic foundations. Scores are presented on a scale ranging from 0 to 1, with 1 representing the highest MSA score in the United States and 0 the lowest.

Human Resources

As the economy becomes increasingly knowledge-intensive, the role of this key economic foundation continually grows. International and domestic analyses consistently find that strong human resources (i.e., an educated population) are correlated with economic performance.

In Figure 2.1,* the value on the left side, "Overall Education Scale," is a composite index of all the values to the right. The scores are based on the relative percentage of persons with an Associate Degree, Bachelor's Degree, and Graduate Degree compared with other MSAs. As Figure 2.1 shows, the Texarkana region lacks a high concentration of people with advanced educational attainment, suggesting that the region may have difficulty in growing high-wage, high-growth industries, such as software or financial services, which demand highly trained workers.

Technology

A region's technological capacity often determines its ability to add value to its goods and services. Without technology, a region cannot support high-wage, high-growth occupations in areas such as research and development (R&D) or product development, which are increasingly critical to economic health as lower-skill occupations (e.g., parts assembly) migrate to low-wage countries. Moreover, access to technology can help local industries create competitive advantage by providing early entry into new markets.

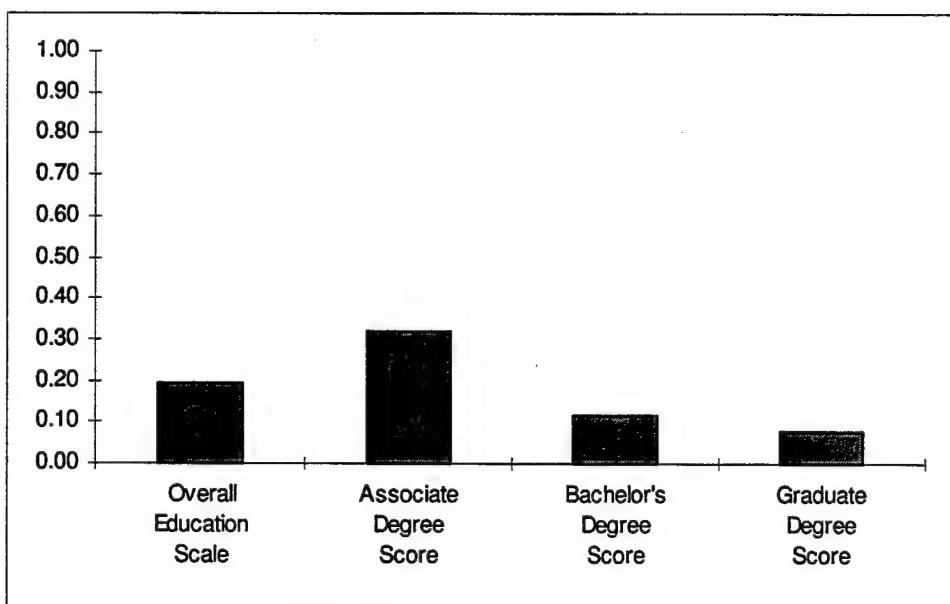


Figure 2.1. Human Resources Index, 1990.

* Source: U.S. Census Bureau.

As Figure 2.2 illustrates, the Texarkana MSA does not have a well-developed technology foundation.* In particular, the region is weak in all three categories of technological capacity. The scientist scale measures the regional concentration of scientists and engineers; the patent scale indicates the concentration of patents; and the R&D scale represents per capita Federal R&D expenditures in comparison to other MSAs. If the weakness in all three of these categories go unaddressed, Texarkana's ability to shift into higher value-added activities may be limited and it may result in a gradual deterioration of the economic base.

Quality of Life

Quality of life is a somewhat subjectively defined economic foundation that nonetheless is critical to attracting firms and talented workers, who are increasingly in short supply. The most well known example is the shortage of information technology workers described in a recent report by the U.S. Department of Commerce.† But the search for highly skilled workers crosses industrial and occupational categories.

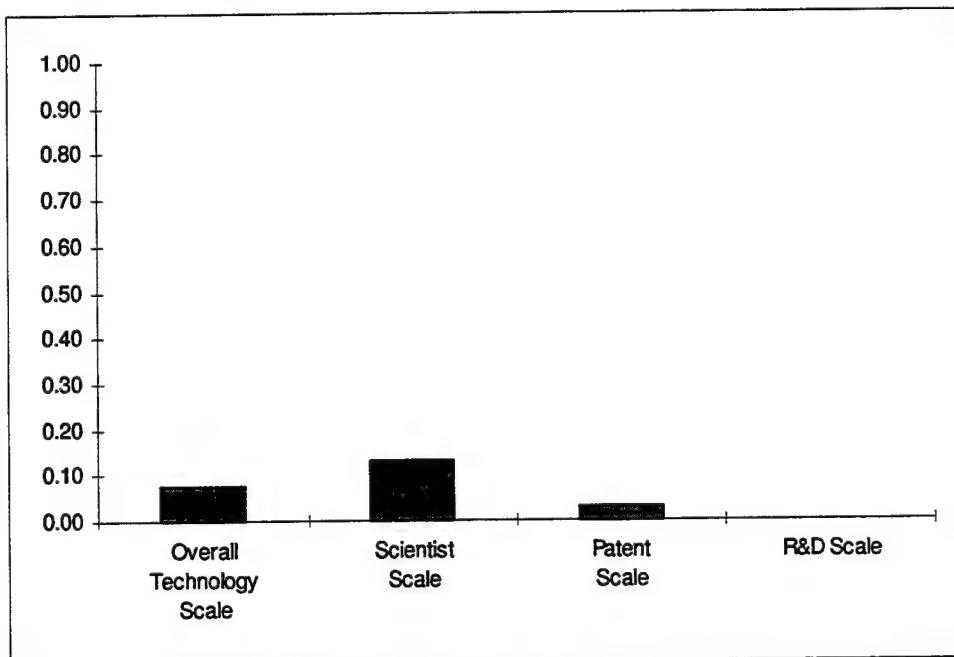


Figure 2.2. Technology Index.

* National Science Foundation 1994; Equal Employment Opportunity Commission (EEOC) 1990; U.S. Patent and Trademark Office 1995.

† *America's New Deficit: The Shortage of Information Technology Workers*, Office of Technology Policy, U.S. Department of Commerce, 1998.

The score for Cultural Amenities considers the number of libraries, museums, theaters, art galleries, symphonies, and other cultural institutions. Homeownership scores are based on the percentage of households owning homes. The scores for recreational amenities are based on the presence of restaurants, golf courses, movie screens, sports, outdoor recreation, parks, and several other recreational facilities. Infant mortality is an inverse scale with higher scores indicating lower infant mortality.*

Compared with other foundations, two of the Quality of Life indicators (homeownership and infant mortality) are relatively high in the region. The overall score, however, is still fairly low due the region's weakness in cultural and recreational amenities (see Figure 2.3). These scores suggest that one of the findings from the "Comprehensive Reuse Plan for Red River Army Depot" — that quality of life is a competitive asset for the region compared with the nation — is at odds with the facts. While the region may be a low-cost area, cost is only one aspect of a much broader "quality of life" indicator.

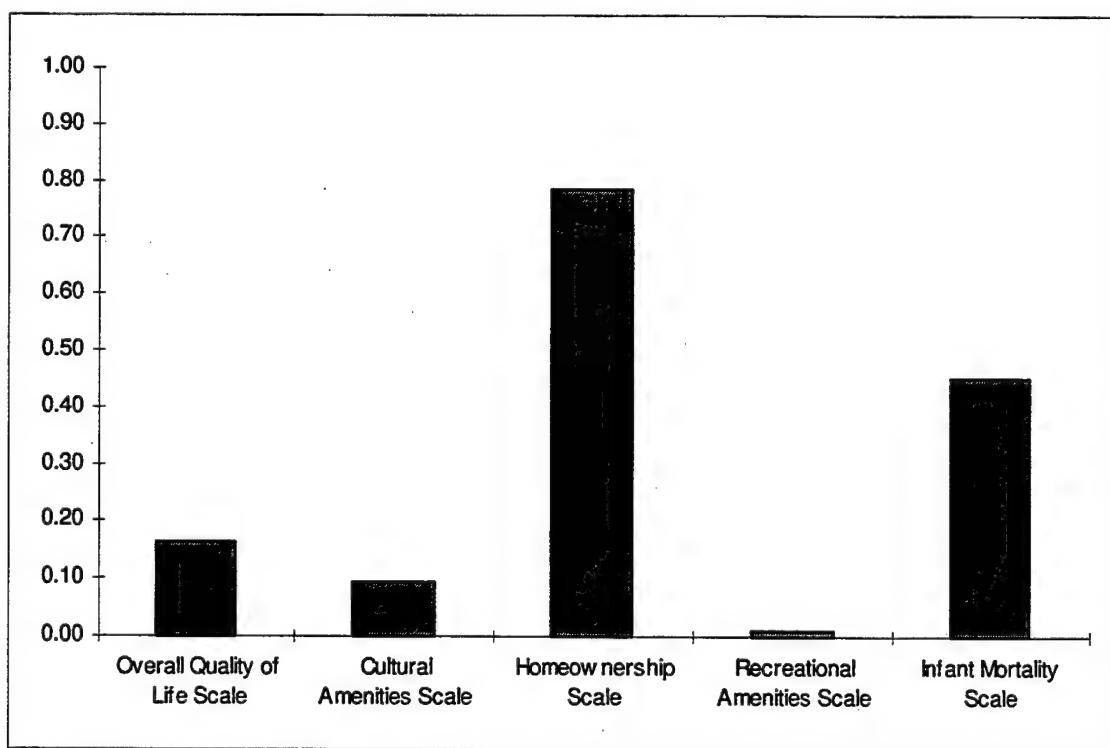


Figure 2.3. Quality of Life Index, 1995.

* *Places Rated Almanac 1993; Census of Population and Housing 1990; USA Counties 1990.*

Finance

A specific type of capital is fueling many of the fastest growing industries in the United States — venture capital. With rapid technological changes creating new products (e.g., information technology, biotechnology, etc.), markets are constantly changing. Access to working capital is not adequate in many regions to sustain the capital needs of the high-growth, higher risk ventures that have recently accounted for a resurgence in American competitiveness.

According to the best data available, the Texarkana MSA has little recorded venture capital market. Without venture capital, the region will not be able to grow industries that are deemed too risky by traditional sources of capital, which are, unfortunately, the most rapidly expanding markets in the United States.

Conclusion

CERL finds that, while the LRA and the region can look forward to likely success in their redevelopment project pursuant to an EDC, the region's capacity to generate jobs is severely limited by its relatively weak economic foundation scores. Such a weakness, while difficult to incorporate into hard job creation estimates, is worthy of consideration and may be incorporated into the ultimate negotiation in justification for discounts from fair market value (FMV).

3 EDC Application's Consistency With the Overall Redevelopment Plan

The Bowie County LRA was created in Bowie County, Texas, pursuant to the 1995 BRAC commission announcement that mandated a realignment of certain Red River Army Depot activities to other Army Depots. The LRA is composed of 14 members who are residents and political leaders of Bowie County. The Office of the Assistant Secretary of Defense for Economic Security officially recognized the “Bowie County Local Redevelopment Authority” in a memorandum dated 29 February 1998. The Reuse Plan and EDC Application refer to the LRA by other titles such as “Red River Local Redevelopment Authority” and “Bowie County/Red River Local Redevelopment Authority.” CERL assumed that these other organizational titles all refer to the officially recognized LRA for purposes of this EDC review.

The reuse process began in January 1996 and was completed and approved in June 1997. Instead of submitting a separate EDC application package that conformed to the application format outlined in the regulations and in implementing guidance, the LRA submitted their Reuse Plan and an expanded business and operational plan as their EDC Application. The deficiencies related to this application approach are documented in Chapter 10, **Review of the Application for Completeness** and in related chapters of this technical review. Because the LRA used this approach, the application package captures the spirit and intent of the reuse plan. The business and operational plan, which includes detailed accounting of the marketing and implementation strategies, is also consistent with the reuse plan with the following notable exceptions:

- *Utilities privatization.* The application fails to adequately address either a definitive transition plan to third party providers or a defensible operations plan by the LRA for the utility systems. In fact, the reuse plan only briefly discusses the need to address privatization and upgrades of the utility system to serve future users under the redevelopment scenario. However, a key objective of the business and operations plan is to incorporate all water, sewer, industrial sewer, electrical, natural gas, and related distribution infrastructure at RRAD and Lone Star Army Ammunition Plant as part of the EDC request. Both documents in the EDC package focus on proposed capital

expenditures needed to provide safety and code improvements, as well as efficiency and expansion investments, without providing any discussion of related long-term operational, service quality, rates, or revenue considerations. These obvious omissions are likely to be resolved through negotiations and further study. As a result, CERL was given direction from DAIM-BO to defer financial analysis of the utilities transfer and proceed with a technical analysis of the EDC application using the assumption that long-term, high-quality utility service would persist for current and future users of RRAD.

- *EDC parcel boundary revisions.* Section 2.7(A)(1) identifies changes from the reuse plan with respect to the plan's parcelization strategy.
- *Wetlands mitigation.* On 3 August 1998, the LRA submitted an amendment to the EDC Application. This amendment was produced in response to the discovery, after the January 1998 EDC Application submittal, of regulated wetlands in the planned new development area on the west end of the EDC parcel. The discovery of the regulated wetlands was unanticipated and an obvious constraint to the intended reuse plan. The LRA proposed a wetlands mitigation strategy involving the development of the site as proposed with careful study, planning, and mitigation permitting/resolution accomplished as the redevelopment process moves forward. The costs and engineering constraints associated with a wetlands replacement strategy on LRA-owned property have limited impacts on the business and operational plan (See Chapters 4 and 5 for an expanded discussion). However, the ultimate replacement of wetland acreage (as much as 6 for 1) would likely create an environment where the LRA would attempt to negotiate for placement of the mitigated wetlands on government-retained property. CERL raises this point for consideration to prior negotiation with a reminder that, should the government agree to create wetlands on government-owned land, the government would then be responsible for those wetlands pursuant to Federal, state, and applicable law. If the government fails to concede to such a strategy, the wetlands issue will adversely constrain successful development of the site.

4 Business Plan Review and Market and Financial Feasibility Analysis

Objective

The objective of this chapter is to provide a review and analysis of the financial feasibility of the Red River Army Depot EDC Application and its business and operations plan. CERL's technical review of financial feasibility includes market analysis and the need and extent of proposed infrastructure investment (Chapter 5, **Need and Extent of Proposed Infrastructure Improvements**). Elements of importance in the review of the business plan include (DoD 1997):

- a property development timetable, phasing plan, and cash flow analysis (for 15 years)
- a market and financial feasibility analysis describing the economic viability of the project including:
 - an estimate of net proceeds over the projected development period
 - the proposed consideration and payment schedule to DoD
 - the estimated fair market value
- a cost estimate and justification for infrastructure and other investments needed for the development of the EDC parcel (Chapter 5, **Need and Extent of Proposed Infrastructure Improvements**)
- local investment and proposed financing strategies for the development (also covered in Chapter 6, **Extent of State and Local Investment and Risk**).

Background

The Bowie County/Red River LRA is requesting an EDC to acquire approximately 770 acres of RRAD, along with all the utility systems serving RRAD and the Lone Star Army Ammunition Plant. These systems include: (1) water treatment and distribution, (2) wastewater treatment and collection, (3) industrial wastewater and collection, (4) gas system and distribution, (5) electrical system and distribution, and (6) telecommunications system. The LRA is proposing a no-cost conveyance based on the range of negative net present values of their discounted cash flow analysis. The EDC parcels are unencumbered and

contiguous based on a Consolidated Plan that was selected over a Dispersed Plan (as detailed in the RRAD Reuse Plan), because it was considered more efficient by the LRA, given the continuing mission of RRAD under this realignment. To accommodate this plan, the LRA will lease back, at no cost to the Army, the facilities it needs. The LRA also feels this provides them with larger, more marketable parcels for industries most likely to locate at Red River. There are 98 significant buildings (not including very small buildings, sheds, utility pump stations, etc.) containing approximately 917,000 square feet (SF) of total floor space. Almost 18 percent (169,000 SF) will be occupied by the Army under the lease-back arrangement. It is anticipated that nearly 12 percent (106,276 SF) will eventually be demolished by the LRA. No surplus property has been or is being considered for public benefit conveyance, negotiated sale, or public sale.

The Red River EDC Application amends the Reuse Plan to reflect proposed future uses based on 11 land-use parcels as shown in Table 4.1. The dominant facilities in this EDC are the combined maintenance facility (CMF) buildings (identified in Table 4.1 as Interim Lease Buildings) in the Heavy Industrial Area that are part of Parcel 3-C. Built in 1989, they account for over 38 percent (355,563 SF) of the existing square footage. These buildings are in good condition and will be sold as a source of significant up-front revenue for the LRA. In addition, another 860,800 SF of new space is projected to be developed by the LRA and private developers over the 15-yr projection period.

Table 4.1. Proposed EDC land uses and existing acreage and building SF.

Proposed Land Use	Acres	Existing SF
Interim Lease Buildings	0 (Part of Parcel 3-C)	355,563
Parcel 1-A: Heavy Industrial Development	21	4,000
Parcel 1-B: Golf Course Expansion	172	18,820
Parcel 1-C: Business/Light Industrial/Residential Development	56	38,097
Parcel 1-D: Warehouse/Light Industrial Development	152	0
Parcel 1-E: Retail/Commercial-Community Center	73	154,685
Parcel 2-A: Business/Light Industrial Development	48	91,225
Parcel 2-B: Business/Light Industrial Development	42	13,546
Parcel 3-A: Business/Light Industrial Development	116	154,826
Parcel 3-B: Heavy Industrial Development	27	86,215
Parcel 3-C: Heavy Industrial with Main Buildings and Treatment Plant	63	0
Total	770	916,977

The LRA has defined its mission in the Reuse Plan to “Create an environment that acts as a magnet for controlled economic redevelopment of the Red River Army Depot that is friendly to our people, business, community and the environment.” Their formulated goals to accomplish their stated mission are defined to include:

- increase the community’s job base
- create a growing revenue stream and tax base for the county
- improve the marketable skills of their work force
- maintain environmental security
- create a framework for improved quality of life in the region
- ensure that all stakeholders have a voice and opportunity to gain insight and information.

The LRA’s approach is to generate immediate income through the sale of the CMF buildings to AgriBoard, the leasing of the housing, and the expansion of the golf course. This approach will provide revenue, in addition to significant grant funding, to redevelopment and capital improvement costs in the early years.

Market Summary

A detailed discussion of the real estate market segments associated with this development project are presented in Chapter 7, **Local and Regional Real Estate Market Conditions**. Chapter 7 provides the context for the real estate market absorption assumptions used to compile real estate revenue projections used in the evaluation of the business plan contained in this chapter. Pertinent findings are summarized below.

Industrial/Warehouse and Distribution

CERL determined that lease prices for existing buildings would range from \$1.00 to \$3.00/SF. Sale of existing buildings in this classification would range from \$8.00 to \$27.00/SF. The bulk of the existing space available for lease falls within this building classification.

Commercial Office Space

CERL determined that lease prices for existing buildings would range from \$3.00 to \$5.00/SF. Sale of existing buildings in this classification would command at least \$25.00/SF.

Residential Space

CERL assumed that existing homes would continue to be leased at current lease rates until they are ultimately demolished to accommodate expansion of the golf course and industrial park.

Vacant Land Sales

CERL found that vacant land sales could command approximately \$17,000/acre with a premium paid for those lots with direct access to Highway 82 or with golf course frontage. CERL concurs with the LRA finding that this premium could be as high as 30 percent.

Findings for the Real Estate Market

The LRA will need to aggressively market the buildings and land of the surplus property (to overcome the perceived shortcomings of the property) by being competitive with lease terms and sale pricing. The LRA will need to accommodate large warehouse and industrial space users to prevent losing job and tax base to competing counties. The majority of the demand will come from industrial sectors, warehouse, distribution, and manufacturing. Nonretail commercial users will show some interest in the property with appropriate incentives. The LRA should expect absorption of 43,000 to 55,000 SF of building space and 6 to 10 acres annually from regional growth. This absorption amounts to a capture rate of 10 to 15 percent of the regional development, assuming the economy remains stable and the LRA offers competitive deals.

Beyond the local market, the LRA will need to market to large companies, defense industry contractors, regional call centers, and mail order firms, etc. The projected 15-yr build out anticipates 627,800 SF of existing space would be either sold or leased, which is an average for 41,800 SF per year. Additionally, 860,600 SF of new space is to be developed by the LRA and the private sector. This will average 57,400 SF/yr. The LRA estimates that 213 of the 493 acres to be sold to the public will be conveyed over the projection period. This rate is an average of 14.3 acres/yr. The annual absorption estimate of 99,200 SF per year is higher than the projected range of 43,000 to 55,000 SF by the applicant, as it includes

outside demand not within the scope of applicant's market research. The outside demand is expected to come from the types of companies that would be interested in the CMF facilities. The success in creating this demand will depend on the LRA's ability to market the property to prospective companies and developers and generate demand for the construction of speculative buildings for new companies entering the market. However, discounts should not be to an extent that induces large distortions on the regional markets. The LRA will need to discount land and building values of existing facilities to accelerate their disposition. This discounting will help eliminate holding costs associated with existing buildings, reduce borrowing requirements, and outweigh the increase that may be received from the sale of these properties if they were to be held for any additional time.

LRA Revenue and Absorption Assumptions

The LRA has projected that its revenues will come from a variety of sources including sales, leasing, revenue sharing, and contributions and grants over the life of its business plan. The largest single source of revenue will be from the leasing of existing buildings, particularly the CMF buildings. The CMF buildings contain over 345,500 SF, or 71.6 percent of the square footage available to be leased. This percentage is even higher (over 91.1 percent) when you factor in the demolition of over 103,000 SF of temporarily leased space by the end of Year 8 in the business plan. The CMF buildings account for more than \$11.2 million, that is 80.8 percent of the lease revenues on existing buildings and over 37 percent of total revenues projected under the LRA's Business Plan scenario.

When the revenues projected to be received from state and county contributions and matching funds and DoD Office of Economic Adjustment (OEA) and Economic Development Administration (EDA) grants are aggregated, another \$6.1 million or 16.2 percent of the business plan revenues are accounted for. The largest component of these funds is the EDA grant of \$6.5 million projected to be received over Years 2 through 5. The required 20 percent matching funds associated with the EDA grant will be funded 80 percent by the State of Texas (\$1.3 million) and 20 percent by Bowie County (\$0.325 million). The matching funds are projected to be received in Year 1 of the business plan. These EDA grant funds and the matching funds from the state and county, along with grant funding from OEA of \$0.4 million over Years 1 through 5 are required to provide financial feasibility to the LRA Business Plan in the first 5 years.

The other major sources of business plan revenue are from golf course operations (14.2 percent), utility revenue sharing (10.1 percent), land sales (9.6 percent), and sales of existing facilities (8.0 percent). Golf course revenues are projected

net of fees to a contract operator and operating expenses. The assumption is that only the existing 9 holes are available during the first 5 years and that a fully operational 18 hole course with clubhouse, restaurant, pro shop, and maintenance facilities will be open in Year 6. Over the 15-yr period, the projected golf course revenue is in excess of \$5.3 million. The LRA makes the assertion in the business plan that this revenue is sufficient to cover only the debt service associated with the costs to upgrade and expand the golf course. Utility revenues are projected based on the privatization of the Depot utilities to a partner of the LRA, who has not been identified at this time. The arrangement will be for the partner to own and operate the utility systems and provide a participatory agreement returning a percentage of gross annual revenues to the LRA. These revenues are based on the absorption assumptions made in the business plan regarding square footage occupied over the 15 years and local and national data (depending on type of utility) regarding rates. The projections use a factor of 2.5 percent of annual gross utility revenues to project over \$3.7 million to be received over the 15-yr period.

Sales of land and existing facilities generate approximately \$6.7 million over the 15-yr projection period. Land sales are \$3.6 million of this total, based upon a forecasted sale of approximately 214 acres at an average price of approximately \$17,000/acre. The LRA's assumptions include a 2 percent annual price inflation. The per acre price varies depending on the land-use classification. Business and light/heavy industrial land average \$16,300/acre. Retail land averages \$38,700/acre and warehouse sites average \$13,600/acre. Business and industrial sites with frontage located along Hwy 82 or the golf course are projected to demand a premium of 30 to 35 percent. This 214 acres of land sales is projected to support some 860,000 SF of new nonresidential development. It should be noted that, in addition to these 214 acres projected for sale, there is an 82-acre parcel that is not scheduled for development during the projection period.

Sales of existing buildings are \$3.0 million and include over 237,000 SF at roughly \$12 to \$13/SF. The anticipation is that several of the smaller administrative buildings will attract early attention. These buildings range in size from 3,000 to 5,000 SF. On average, the LRA projects existing building sales of 15,800 SF/yr. Several miscellaneous sources account for a combined 4.9 percent of business plan revenue. These revenues are from common area maintenance (CAM) and onsite timber sales. CAM revenues range from several thousand dollars in the early years to over \$86,000 in those years with high occupancy in the CMF buildings. Onsite timber sales in Years 1 and 2 amount to slightly over \$300,000.

The first 2 years of the business plan rely almost entirely on state and county contributions and matching funds and OEA and EDA grants. There is some revenue generated by one-time timber sales, housing rentals, sales of land and existing buildings, and the beginning of golf course income and leases of existing buildings. However, it is not until Year 3 that the business plan projects the full leasing of the CMF buildings and the beginning of utility revenues that annual revenues other than state and county contributions and matching funds and OEA and EDA grants become significant. At this point, annual revenues begin to stabilize at levels that can support the LRA's business plan without the assistance payments. In Years 7 through 9, the business plan makes the assumption that the CMF buildings will have a significant vacancy resulting in reduced total revenues. By Year 10, the buildings are back to normal occupancy and annual revenues are again stabilized at levels needed to support the business plan. From Year 6, projected annual revenues stabilize and rise gradually from approximately \$2.3 million to over \$2.7 million in Year 15 with the exception of Year 8, in which the vacancy projected in the CMF buildings has a depressing effect and reduces revenues to slightly over \$1.3 million.

Findings for Revenue and Absorption Assumptions

CERL is in basic agreement with the LRA's Business Plan with regard to the absorption of the existing building square footage and the lease rates that have been used to calculate revenues associated with the resulting leases. The New Boston market has not been extremely active and must compete with established industrial parks in the Texarkana area that have existing improved land and buildings available for lease and sale. However, the aggressive support of the Texarkana Chamber of Commerce, which acts as the developer of the industrial parks in Texarkana and shares several key members with the LRA, will help the sales and leasing effort in the early years. Several early leases that have been executed on smaller buildings at the Depot evidence this projection. With this set of facts, one would expect the business plan to be extremely sensitive to the success or failure of the leasing of the CMF buildings. In fact, this is exactly what CERL finds in its analysis of the LRA's Business Plan. The only revenue item the CERL analysis found to be questionable was with regard to the timing of the recognition of the state and county matching funds required under the EDA grant. These matching funds of over \$1.1 million are recognized in Year 1 even though the total capital expenditure during Year 1 is only \$670,000. This would mean that some \$430,000 would not be available in Year 1 and could cause cash flow problems if revenues varied from projected amounts.

Events subsequent to the LRA's submission of its application have led to significant changes to the assumptions made in the business plan by CERL reviewers.

One of these changes was made in consultation with the Base Realignment and Closure Office (DAIM-BO) and was directly related to Army policy with respect to the privatization and transfer of the Depot utilities. While the LRA assumed the utilities would be transferred as part of the EDC, CERL found that market information was not sufficiently developed to support a valuation on the utility systems requested in the EDC Application. It was determined in discussion with DAIM-BO that the utility systems should be removed from consideration in the EDC Application and a request for the transfer of the utility systems should be submitted under a separate EDC Application when a sufficient market analysis is completed and a financially feasible business plan is developed.

Another significant change is with regard to the CMF buildings. When the EDC application was submitted, the CMF buildings were slated to be leased over the projection period, but the LRA subsequently received an offer from AgriBoard to purchase those buildings. CERL's finding in discussions with the LRA is that this offer appears to be legitimate and will have a significant impact on the financial feasibility of the business plan. CERL made the determination to incorporate this information into its scenario development. The result of this change is to eliminate significant annual lease revenues from the business plan and to reflect the AgriBoard sale proceeds over a 5-yr period beginning in Year 2. Also, a related change is the sale to AgriBoard of the personal property contained within the CMF buildings. Under the LRA-developed business plan, the assumption is that the value of any personal property in the CMF buildings is implicit in the lease revenues received. However, under the CERL-developed scenarios, the value of this personal property is presented separately from the building value. The sale proceeds are received beginning in Year 1 and continue through Year 5.

CERL requested the details of the offer to purchase the CMF buildings, but was unable to secure those details. To incorporate the impact of this change, CERL needed to extrapolate a valuation for the CMF buildings from the information contained in the business plan. It is CERL's finding that, after an analysis of the Net Operating Income (NOI) of the CMF buildings and in light of the real estate market conditions in New Boston and Dallas with respect to the CMF buildings, a reasonable valuation for the CMF buildings is \$6.9 million. CERL has also made a valuation on the personal property contained within the CMF buildings. Based on discussion with the LRA as to the type and amounts of financing that the purchaser intends to obtain for the acquisition of the personal property, CERL has determined a valuation of \$2.5 million payable in five annual installments of \$500,000 beginning in Year 1 of the CERL-developed scenarios.

Finally, subsequent to the submission of the EDC Application by the LRA, it was discovered that portions of the surplus land within the footprint of the EDC parcel were regulated wetlands areas. To determine the impact this finding had on their business plan, the LRA retained an engineering firm to cursorily review the affected parcels and determine a range of costs associated with the actions necessary to delineate and mitigate the wetlands areas. After review by CERL engineers, additional infrastructure costs were incorporated in the CERL-developed scenarios to reflect these requirements. CERL concurred with the LRA, however, that, with proper mitigation of wetlands, the timing and absorption of encumbered properties would not be affected. These scenarios are discussed later in this chapter.

LRA Operating Expenses

The business plan clearly details the assumptions for the operations and maintenance (O&M) expenses of the LRA's development of RRAD. The LRA's Business Plan cost estimates break down almost equally between two categories: (1) buildings, grounds, and municipal services, and (2) administration and marketing. Actual percentage breakdowns of costs between these two categories in the business plan are 49.5 and 50.5 percent, respectively. Collectively, these costs total \$13.8 million over the 15-yr projection period.

Building, grounds, and municipal service costs are highest in the early years through Year 8, reflecting the initial carrying costs associated with the vacant and unsold buildings. As buildings are leased and sold, many of these costs are transferred to the owner/lessee. Because of the leasing assumption related to the CMF buildings — full or partial vacancy in Years 8 through 10 — building maintenance costs that had been going down from Year 2 increase to reflect the maintenance costs for this 345,500 SF. After Year 10, building maintenance costs for both vacant and unsold buildings level off at a total of approximately \$50,000 and increase annually by a 2 percent inflation factor only. Private security is also a significant cost over the projection period. It increases annually from \$150,000 in Year 1 to over \$187,000 in Year 10 and then declines to a stabilized level of approximately \$50,000 annually, increasing for inflation only at a rate of 2.5 percent. Other costs in this category that vary with the vacant and unsold building inventory include grounds, insurance and other maintenance/contingency. Costs for fire and emergency medical service and county police are projected to increase at an annual rate of 2.5 percent reflecting only an inflation factor.

Within the administration and marketing category, salaries and fringe benefits account for over \$3.2 million over the business plan projection period. This cost

is 46 percent of total category costs of \$7 million for the 15-yr period. This category of costs generally rises to approximately \$632,000 in Year 7 and then declines to a stabilized \$290,000 to \$300,000 annually in Years 11 through 15.

Findings for Operating Expenses

CERL is in basic agreement with the LRA's Business Plan with regard to the operating expenses and the significant components presented in the business plan. In recasting the business plan using the assumptions in the EDC Application, CERL was able to reproduce the LRA's numbers with no material differences.

LRA Infrastructure Improvement Costs

The LRA EDC Application presents a scenario of infrastructure improvements totaling more than \$22.2 million. Major components of this capital program are (1) infrastructure (roads, utilities, landscaping, signage, etc.) – \$8.8 million, (2) soft costs (A&E, design and inspection, bond counsel, and contingency) – \$6.6 million, (3) building improvements and tenant fit-up – \$3.3 million, (4) golf course upgrade/expansion – \$2.6 million, and (5) building demolition – \$.9 million. While the capital program is spread over most of the 15-yr projection period, approximately \$15.9 million (71.6 percent) is invested in Years 2 through 5 of the business plan (Appendix A, Table A.1).

Per the EDC Application, the capital improvements will be financed using a combination of Federal grants, state and local matching funds required to obtain the Federal grants and cash flow generated by the business plan. For any requirements in excess of these funds, Bowie County and the LRA will be able to issue 20-yr publicly rated bond instruments at an average interest rate of 5.5 percent. The details of the borrowing and subsequent debt service are shown in the borrowing schedule presented in the EDC Application (Appendix N: Annual Debt Service Calculations). The assumption in this schedule is that bonds in the amount of the capital expenditures unfunded by other sources will be issued each year and the proceeds used to fund those costs. The debt service required to service the repayment of these bonds grows from \$0.29 million in Year 2 to approximately \$1.9 million in Year 9 and then gradually declines each year to approximately \$1.5 million in Year 15. At the end of Year 15, the principal balance remaining on these bonds is approximately \$7.9 million. Table A.4 contains a recast of the LRA's debt service plan.

To assist with the technical review with respect to infrastructure improvements CERL engineers conducted a site visit of the Depot where they completed a thorough review of the LRA's capital improvement program as well as an independent condition assessment. The results of this assessment and review of the proposed capital improvement program are presented in detail in Chapter 5, **Need and Extent of Proposed Infrastructure Improvements**.

Findings for Infrastructure Improvement Costs

CERL believes that the capital improvement program as presented in the EDC Application is consistent with the reuse plan developed by the LRA, with one notable exception. As discussed earlier, subsequent to the LRA submission of the EDC Application, it was discovered that there were regulated wetlands in parts of the surplus area to be developed by the LRA. Because this issue was not known at the time the reuse plan was drafted or upon initial submission of the EDC Application, costs submitted as an amendment to the EDC Application were not included in the reuse plan. CERL engineers reviewed the costs related to the wetlands issue to determine their reasonableness. Those costs were then included (as appropriate) in the CERL-developed scenarios. CERL also made assumptions using knowledge of prior redevelopment plans as a basis for developing costs for comparison and evaluation with respect to the LRA's estimates. The net result of CERL's analysis was to produce a range of costs that reduced the capital expenditures needed to accomplish the redevelopment proposed by the LRA to 25 percent of project cost — a decrease of 10.8 percent. Using a 10 percent contingency, CERL determined the infrastructure improvement costs necessary to accomplish the redevelopment proposed by the LRA was between \$16.7 million and \$19.8 million, some \$2.4 million to \$5.6 million less than the LRA's numbers. This difference has a positive impact on the valuation of the business plan and is quantified later in the discussion of the CERL-developed scenarios.

Summary of Cash Flow and Net Present Value

The business plan presents a discussion in the EDC Application regarding the NPV of the discounted cash flow and the estimated FMV of the business plan (Chapter 3, paragraph F, page 86). Presented in Appendix O, is a schedule calculating the NPV and FMV. The narrative on page 86 of the EDC Application states that the analysis summarizes annual revenues, O&M expenses and capital expenditures to determine a valuation for the business plan. In these schedules, the costs of the capital expenditures are recognized fully in the year in which they are made. Also, no attempt was made to calculate a reversion value of the stabilized and continuing revenue sources at the end of the business plan

projection period. Using this methodology, the business plan presents valuations based on three risk scenarios by varying the discount rate used. The calculated value at an 8 percent discount rate for a low risk scenario is *negative* \$1.5 million. At a moderate risk level and a 13 percent discount rate, the business plan valuation is \$2.5 million. Finally, a high-risk scenario is presented by using a discount rate of 18 percent resulting in a value of *negative* \$2.8 million.

While the LRA has gone through the process of presenting information to determine these valuations (*negative* \$1.5 million to *negative* \$2.8 million), they do not present any final determination of the valuation of their application, but they appear to argue for a zero-cost EDC conveyance.

Findings for Cash Flow and NPV

CERL has found that, in both the EDC Application's narrative on page 86 and the schedule in Appendix O, there are several significant errors in the methodology used to determine the values presented. First, the discounted cash flow analysis incorrectly expenses capital expenditure costs fully in the year in which the improvements are made. The appropriate way to reflect the capital expenditure costs is through the inclusion of the debt service costs associated with any financing required and/or cash invested in the capital improvements as reductions of annual cash flow. By incorrectly reducing cash flow by the full cost of the capital expenditures in a single time period, the LRA is unrealistically depressing the valuation of the business plan. This reduction is especially significant because of the timing of the majority of the capital expenditures in the early years of the business plan projection period. Second, no determination has been made of the residual value of the business plan assets by capitalizing the NOI at the end of Year 15. At that point, NOI generated from stabilized, continuing revenue sources should be capitalized to determine a value of the producing assets at Year 15. The LRA has not assumed that it will cease business in Year 15; however, it is appropriate to value these assets as if they were for the purpose of the discounted cash flow analysis. In assuming a sale of assets at Year 15, it is also assumed that the proceeds of any sale would then be applied to the retirement of any outstanding principal borrowed, with the residual then discounted back to present value. Correcting for these methodological errors, NPV of annual cash flow increases from *negative* \$2.8 million to approximately \$1.2 million using a discount rate of 18 percent, from *negative* \$2.5 million to approximately \$1.3 million at 13 percent, and from *negative* \$1.5 million to \$1.5 million at 8 percent.

CERL-developed Scenarios

Based on the findings and the subsequent events as explained above, CERL developed two scenarios to provide an analysis of the impact to the income streams and the resulting NPV ranges.

CERL1 Scenario

CERL's first scenario was developed using the following assumptions (Table A.6):

- The LRA's revenue assumptions adjusted to reflect the removal of the utility system from consideration in the EDC Application and the sale instead of lease of the CMF buildings.
- CERL-developed infrastructure costs were used instead of the LRA-developed costs. Infrastructure costs also reflect the removal of the utility improvements and the addition of the delineation and full mitigation of the wetlands areas. Infrastructure costs developed by CERL are \$18.7 million versus \$22.2 million developed by the LRA.
- The discounted cash flow analysis was corrected to reflect the proper treatment of the capital expenditures costs as outlined above. CERL also included a reversion value by capitalizing the business plan stabilized NOI at the end of Year 15.

CERL2 Scenario

CERL's second scenario (Table A.7) used the same assumptions as detailed above, except that only the costs for a partial wetlands mitigation are included in the infrastructure costs.

Findings for Scenario and Sensitivity Analysis

The sensitivity of changes to the LRA's Business Plan assumptions can be seen by reviewing Table A.8. The valuations fall within a range of \$1.6 million to \$1.8 million under the LRA's Business Plan as adjusted by CERL (by removing utility related items, calculating a reversion value, and using 18 and 13 percent discount rates, respectively). These valuations result from the correction of the LRA's methodology errors and increase the business plan values from *negative* \$2.5 to *negative* \$2.8 million, respectively. CERL's valuations range between \$1.1 million and \$1.5 million under the CERL1 and CERL2 scenarios. These scenarios reflect the incorporation of the sale assumption related to the CMF buildings

as well as the CERL-developed infrastructure costs and the costs of the full and partial wetlands remediation, respectively. CERL used discount rates of 16 and 12 percent.

The incorporation of the CERL assumptions into scenarios 1 and 2 decrease the business plan valuation from the LRA's valuation as adjusted and corrected by CERL. The primary factor driving this decrease in valuation is the assumption that the CMF buildings will be sold and payment received over Years 2 through 6, instead of the receipt of annual lease revenues over the entire projection period. The impact of this decrease is to create early cash flow and value in the business plan followed by subsequent years of negative cash flow that depress business plan valuation. This effect reflects the sensitivity of the LRA's Business Plan to the lease revenues that are associated with CMF buildings and the fact that even the sale of these buildings cannot offset the loss of the continuing stream of associated lease revenues. Also, the CERL-developed infrastructure costs were not significantly different from those developed by the LRA when the wetlands mitigation costs are incorporated. So, this element had little impact on the final valuation variances. CERL2 has slightly higher values than CERL1 because CERL2 assumes only a partial wetlands remediation at a lower cost.

Financial Feasibility Analysis and Conclusion

CERL finds that, under all scenarios (from the recast of the LRA's Business Plan to both CERL-developed scenarios), the reuse plan as developed by the LRA and subsequently amended has significant value and is financially feasible. The LRA has obtained a major commitment from Bowie County and, to a limited extent, the State of Texas to fund the infrastructure as needed to accommodate the reuse plan. The LRA has spent considerable time and effort to develop a plan that takes advantage of the physical, locational, and market advantages of the Depot. Moreover, they can achieve a significant start in their redevelopment with the successful sale of the CMF buildings, which represent a significant amount of the square footage to be redeveloped at the Depot. This sale will provide early cash flow and a substantial occupant to help in future marketing and development. CERL finds that the NPV of the business plan as proposed by the LRA and adjusted by CERL ranges from \$1.5 million to \$1.8 million. The values for the CERL1 scenario range from \$1.1 million to \$1.4 million, and for the CERL2 scenario, from \$1.4 million to \$1.5 million, resulting in a final recommended range of \$1.1 million to \$1.5 million.

5 Need and Extent of Proposed Infrastructure Improvements

Objectives

The objectives of this chapter are to: (1) determine if the LRA-proposed costs in the EDC Application for the identified scope of work fall within the range of reasonableness of an independent estimate, and (2) evaluate the need and extent of the proposed scope of infrastructure improvements as appropriate to encourage investment and job creation at the RRAD.

Approach

CERL has followed the following four-step methodology in evaluating RRAD infrastructure requirements identified in the EDC Application.

Step 1: CERL technical specialists conducted a site visit to RRAD on 26 to 27 February 1998 to conduct a visual evaluation of the current condition of the installation's major infrastructure systems and facility inventory. This evaluation included developing a condition assessment, identifying any repair requirements, and determining any existing infrastructure limitations to the carrying capacity of the installation. These findings were used in Step 4 to check the reasonableness of the EDC Application's proposed scope and the associated cost estimates. Also during this site visit, RRAD engineering staff members were interviewed and real property information was collected.

Step 2: During the site visit, a detailed review was made of the EDC Application and the Reuse Plan. This review provided an overview of the condition of the installation (from the applicant's perspective) and goals of the proposed Reuse Plan. The EDC Application provided an indication of the infrastructure assessment criteria that had been used and available sources of information.

Step 3: An analysis that included synthesis of the findings from the field surveys and collected information was conducted to create a supportable baseline infrastructure condition assessment, to determine any carrying capacity limitations imposed by the current infrastructure relative to planned reuse, and to identify the scope of necessary improvements. An independent cost estimate of the LRA-proposed infrastructure improvement plan was made to validate the submitted cost estimates. The infrastructure baselines were then used to review the scope and necessity of the LRA improvement program. The purpose of this part of the review was to determine if the infrastructure improvement program specified was necessary and if the scope was correct to provide adequate infrastructure functional requirements and to support the necessary investment in RRAD.

Step 4: The findings from Step 1 and Step 3 were used to review the infrastructure cost estimates proposed by the LRA in the EDC Application. The need and extent of the proposed LRA program were also reviewed. A detailed analysis of any differences that existed was conducted, and the findings are presented later in this chapter.

Background

The LRA has proposed a 15-yr redevelopment approach. This application has identified a total of 10 parcels of land and buildings for development, lease, or sale over the 15-yr plan. The development and reuse of each parcel is spread over several years within the plan. Infrastructure projects for the 770-acre parcel include clearance and preparation of land, road construction, road reconstruction and the addition of railway crossings to Hwy 82, additional entrance signs, street lighting, and golf course upgrade and expansion.

Table 5.1 summarizes the infrastructure improvement programs, fees, and contingency, which are contained in the EDC Application. The cost stated in the EDC Application for contingency represents 17.3 percent of the total hard cost. The comparison of costs was developed by verification of site clearance acreage, road construction, and reconstruction footages from drawings. These quantities were used as a basis for developing a cost breakdown structure, which was then estimated using the appropriate *RS Means* cost manuals with the cost adjusted for the local index. The significant cost differences between the LRA cost projection and the CERL cost estimates are presented in detail in the discussion. Comparison of cost was completed based on the quantities used by the LRA to develop a base cost and establish a reasonable cost range using 10 percent contingency for a minimum estimate and 30 percent contingency for a maximum estimate. Table 5.2 compares the cost as proposed by the LRA to an estimate by

CERL for essentially the same scope of work. Table 5.3 compares the cost as proposed by the LRA to an estimate by CERL based on a scope of work comprising the need and extent of required infrastructure improvements.

Table 5.1. LRA cost estimates for proposed infrastructure improvements.

Year	Site Clearance	Road Con. & Rec.	Railroad Crossings	Entrance Signs	Street Lighting	Misc. Roads	Golf Course	Tenant Fit-up
1	\$114,800							\$73,844
2	\$106,600		\$200,000	\$15,087		\$590,000		\$273,059
3	\$245,981	\$529,375			\$19,760	\$354,000	\$835,000	\$1,425,800
4	\$0	\$529,375		\$15,000	\$19,760	\$236,000	\$657,500	\$93,048
5		\$529,375	\$200,000		\$19,760		\$620,000	
6							\$237,500	
7								
8	\$205,000	\$397,031		\$30,000	\$14,820			
9		\$397,032			\$14,861			
10								
11								
12								
13	\$147,600							
14			\$264,688			\$9,880		
15								
Total	\$819,980	\$2,646,875	\$400,000	\$60,088	\$98,840	\$1,180,001	\$2,350,000	\$2,899,219

Year	Build. Demo	Subtotal	Contingency	Total Cons. & Cont.	Soft Cost	Total Hard & Soft Costs	Wetlands	Total
1		\$188,644	\$21,811	\$210,455	\$324,189	\$534,644		\$534,644
2		\$1,184,747	\$295,352	\$1,480,099	\$637,246	\$2,117,344		\$2,117,344
3	\$22,875	\$3,432,791	\$560,382	\$3,993,173	\$672,301	\$4,665,474		\$4,665,474
4	\$209,010	\$1,759,693	\$339,703	\$2,099,396	\$440,671	\$2,540,067		\$2,540,067
5	\$271,658	\$1,640,792	\$243,508	\$1,884,300	\$181,127	\$2,065,427		\$2,065,427
6		\$237,500	\$63,213	\$300,714	\$138,814	\$439,528		\$439,528
7		\$441,852	\$91,329	\$533,180	\$126,641	\$659,821		\$659,821
8	\$285,728	\$902,620	\$134,323	\$1,036,943	\$60,595	\$1,097,538		\$1,097,538
9		\$813,586	\$74,082	\$887,668	\$52,968	\$940,637		\$940,637
10		\$219,882	\$20,622	\$240,504	\$14,745	\$255,249		\$255,249
11		\$0	\$0	\$0	\$0	\$0		\$0
12		\$0	\$0	\$0	\$13,223	\$13,223		\$13,223
13		\$147,600	\$40,831	\$188,431	\$93,472	\$281,903		\$281,903
14		\$274,568	\$62,038	\$336,606	\$24,195	\$360,801		\$360,801
Total	\$789,270	\$11,244,275	\$1,947,194	\$13,191,469	\$2,780,187	\$15,971,656	\$1,448,000	\$17,419,653

Note: Soft Costs include Bond Counsel.

Table 5.2. Cost comparison by infrastructure system.

Systems	LRA Cost	CERL Cost	
		Low	High
Site Clearance & Preparation	\$819,980	\$1,090,000	\$1,288,000
Road Construction	\$1,870,000	\$1,744,300	\$2,064,500
Road Reconstruction	\$776,874	\$2,326,900	\$2,745,000
Hwy. 82 Road Crossings	\$400,000	\$395,200	\$467,000
Entrance Signs off Hwy 82	\$60,088	\$59,000	\$70,000
Street Lighting	\$98,840	\$125,000	\$148,000
Misc. Road Improvements	\$1,180,001	\$567,000	\$671,000
Golf Course Upgrade/Expansion	\$2,350,000	\$2,422,000	\$2,862,000
Tenant fit-up allowance	\$2,899,219	\$3,594,000	\$4,247,000
Building Demolition & Disposal	\$789,270	\$973,600	\$1,150,600
Soft Costs (A&E, Design & Insp. fees)	\$2,780,187	\$1,539,000	\$1,965,000
Contingency	\$1,947,194	N/A	N/A
Wetlands	\$1,448,000	\$611,000	\$1,593,000
Total	\$17,419,653	\$15,447,000	\$19,271,100

Note: Soft Costs include Bond Counsel.

Table 5.3. Infrastructure need and extent cost comparison.

Systems	LRA Cost	CERL Cost	
		Low	High
Site Clearance & Preparation	\$819,980	\$1,000,000	\$1,181,000
Road Construction	\$1,870,000	\$1,046,000	\$1,237,000
Road Reconstruction	\$776,874	\$1,905,000	\$2,250,000
Hwy. 82 Road Crossings	\$400,000	\$292,600	\$345,800
Entrance Signs off Hwy 82	\$60,088	\$31,000	\$37,000
Street Lighting	\$98,840	\$55,000	\$65,000
Misc. Road Improvements	\$1,180,001	\$567,000	\$671,000
Golf Course Upgrade/Expansion	\$2,350,000	\$2,422,000	\$2,862,000
Tenant fit-up allowance	\$2,899,219	\$3,594,000	\$4,247,000
Building Demolition & Disposal	\$789,270	\$653,300	\$772,000
Soft Costs (A&E, Design & Insp. fees)	\$2,780,187	\$1,539,000	\$1,965,000
Contingency 10%	\$1,947,194	N/A	N/A
Wetlands	\$1,448,000	\$611,000	\$1,593,000
Total	\$17,419,653	\$13,715,900	\$17,225,800

Note: Soft Costs include Bond Counsel.

Scope of LRA Proposal

The LRA proposal includes the site clearance and preparation of approximately 205 acres of land for development. The LRA proposes the construction of approximately 8,900 ft of new roads, 13,675 ft of road reconstruction, and 13,060 ft of miscellaneous roadway improvements. New road construction is limited to the

undeveloped areas on the property, reconstruction will occur on most of the primary roadways in the central portion of the property, and the miscellaneous road costs involve reconstruction and improvements to the secondary roads in the central portion of the property.

The LRA proposes three new access points to the property in the EDC Application, although four new access points are illustrated on the map in Appendix B. Two of the four will provide access to Parcel 1D, one is located between the existing main gate entrance and the proposed RRAD gate, and the last one is approximately 0.5 miles east of the current main gate entrance.

The LRA proposes the demolition of 35 structures or 106,298 SF. These structures range in use from residential to light industry. The LRA proposes to perform the demolition in several phases. Each phase has been based on the time of expected usage of each structure.

CERL Evaluation of LRA Proposal

Information presented in Tables 5.2 and 5.3, along with discussion that follows the tables, represents the findings and analysis of the EDC Application by CERL. The analysis is based on a site visit and visual inspection of the RRAD infrastructure, discussions with RRAD engineering and operations personnel, review of site drawings and other real property records, and accepted engineering, design, and cost estimating techniques. The LRA's proposed infrastructure costs generally compare favorably with CERL's independent cost analysis findings based on the same scope of work as in the LRA's proposal. The LRA's cost of \$17,419,653 falls within the CERL range of \$15,447,000 to \$19,271,100. This information is provided in Table 5.2. CERL also developed costs based on their analysis of the need and extent of infrastructure improvements to accomplish the same level of redevelopment proposed by the LRA in the EDC Application. This resulted in a different scope than that presented by the LRA. Table 5.3 lists CERL's findings and shows a range of \$13,715,900 to \$17,225,800. In this case, the high end of CERL's cost estimate is below the LRA's costs of \$17,419,653.

Site Clearance and Preparation

Expansion of the property available for new construction requires the clearance of stumps after tree removal and the rough grading of the area after stump removal. The work required covers parcels 1C, 1D, and 1E and totals approximately 205 acres. It is assumed that the cutting and removal of trees will be completed by the contractor who will purchase the timber. The CERL estimate

for this work ranges from \$1,090,000 to \$1,288,000 at 10 and 30 percent contingency levels. The LRA projected cost is near the bottom of this range. CERL findings are documented in Appendix B, Table B.1.

Need and Extent Findings for Site Clearance and Preparation

General agreement exists between the LRA proposed site clearance and the requirements for clearing and preparing the land for development. Using a slightly revised crew and equipment assumption, CERL found that a reduction in cost for site clearance and preparation could be achieved. With this alternative approach to stump removal and rough grading, the cost range is reduced to a range of \$1,000,000 to \$1,181,000. Documentation supporting this revised cost is presented in Appendix B, Table B.2.

Roads

The current Red River road network is not adequate for the proposed use of the realigned property. With the increase in public traffic flow expected, the existing roadways will require some updates and improvements. These improvements include reconstruction of primary roads and miscellaneous upgrades such as crack sealing on secondary roads. In addition to the improvements proposed for the existing roadways, the LRA proposes the construction of new roads in the western parcels and in the central portion. The new construction is to accommodate the proposed new Hwy 82 development entrances. The proposed road construction, reconstruction, miscellaneous improvements, and Hwy 82 entrances/railroad crossings constitute a large part of the LRA infrastructure improvements program — \$4,226,875 or 24 percent of the total proposed infrastructure improvement program (Table 5.2). CERL estimates the road and railroad crossing costs to range between \$5,033,400 and \$5,947,500 at 10 and 30 percent project contingency rates with range differences attributable to cost methodology and quantity take-off measurements. The LRA's cost estimates and CERL's findings are presented in Appendix B, Tables B.3 through B.16.

Need and Extent Findings for Roads and Entrances/Railroad Crossings

New road construction

CERL does not agree with part of the need and extent of new road construction proposed by the LRA.

The LRA has proposed 15,500 ft of new road construction. Part of this proposed new construction is associated with the new entrances off of Hwy 82 that CERL

does not agree with. CERL feels that only one entrance is required to support economic growth and, therefore, only 800 feet of new construction were used for CERL's cost estimate. The 800 ft of new construction provides an entrance to Parcel 1D off of Hwy 82 between subdivisions 2 and 3. CERL agrees with the remaining proposed road construction. Basing its cost estimate on a total of 6,475 ft of new road construction, CERL estimates costs ranging between \$1,046,000 and \$1,237,000.

Road reconstruction

Due to the expected increase in public traffic flow through the main gate entrance and the nonconcurrence with additional entrances to the central portion of the development, CERL agrees with the need to reconstruct those roadways identified in the EDC Application, Appendix B Figure. Road reconstruction projects consist of Main Drive from Hwy 82 to Arkansas Drive, Arkansas Drive, Texas Road from Main to the new RRAD gate, Park Drive, Runnels Village Road, and North Patrol Road from Park to the property line. CERL's estimated cost for road reconstruction ranges between \$1,905,000 and \$2,250,000.

Entrances/railroad crossings

CERL does not agree with the need for all the additional entrances/railroad crossings that the LRA proposes for the central portion of the property. Two of the proposed crossings currently exist. One is the current main gate entrance, which is adequate to provide access to the proposed development. The other is approximately 1.3 miles east of the main gate. This gate will become the RRAD main entrance. The remaining entrances/crossings are located west of the current main gate. CERL proposes replacing these three entrances/crossings with one entrance/crossing to EDC Application Parcel 1D. This entrance/ crossing should be between subdivisions 2 and 3 of Parcel 1D. The remaining proposed entrance is located approximately 0.5 miles east of the current main gate entrance. CERL does not agree with the need for an additional entrance in this area, which is adequately serviced by the current main gate entrance. CERL's estimated costs for the update of the existing main gate railroad crossings and the construction of the new Parcel 1D railroad crossing is between \$292,600 and \$345,800. Road construction for new entrances is proved in the estimates that follow for new road construction.

New Entrance Signs

As part of the transition from a military depot to commercial development property, new signage must be installed at key entrance points to the site. The LRA

proposed the installation of four signs at both new and existing entrances. The capital required for the signs identified in the EDC Application is \$68,088. CERL estimates the installed cost of new signage to be in a range of \$59,000 to \$70,000, which captures the cost proposed by the LRA.

Need and Extent Findings for Entrance Signs

As discussed in a previous section, CERL findings are that two entrances are sufficient to provide access to commercial property. The signage requirement is a direct function of the number of entrances to the site. The need for only two entrance signs reduces the capital requirement to a range of \$31,000 to \$37,000.

Street Lighting

Lighting of streets and roads is a secondary requirement resulting from the construction of new roads. The placement of street lighting is usually at 200 to 225 linear feet (lf) spacing. The EDC Application proposed 15,500 lf of new road construction, which results in a requirement for 74 streetlights. Detail of the 15,500-lf road construction was not provided in the application; therefore, this value could not be verified. Capital required for streetlights as proposed by the LRA is \$98,840. CERL estimates that \$125,000 to \$148,000 is required for this work.

Need and Extent Findings for Street Lighting

The section on new road construction reduced the requirement for new road construction to 6,470 lf, which results in a reduction of the required number of streetlights to 32. Required capital for the reduced streetlight need ranges from \$55,000 to \$65,000. This amount is essentially half of the need proposed by the LRA. It is assumed that the existing electrical distribution system will accommodate the increase in load without modification to switching and transmission equipment.

Miscellaneous Road Reconstruction

The LRA does not provide any information as to what makes up their proposed \$1,180,000 in miscellaneous road reconstruction. Therefore, CERL examined the need for additional roadwork that is not identified in the EDC Application Appendix B. The following proposed costs includes crack sealing secondary roads in the central portion of the realigned property and the reconstruction of the road providing access to Buildings 333 and 312. CERL's estimated costs for the miscellaneous road reconstruction is between \$567,000 and \$671,000.

Golf Course Upgrade and Expansion

The conveyance of property to the LRA includes a 9-hole golf course. The LRA proposes upgrading the existing 9 holes and expanding the course by 9 holes to make an 18-hole golf course. Along with the improvements to the golf course itself, the LRA proposes construction of a new maintenance shed and renovation of the existing Officers Club to a Club House/Pro Shop with a restaurant and dressing rooms. The golf course improvements and clubhouse renovations constitute \$2,350,000 or 13 percent of the total improvement program. CERL's estimate of golf course improvement costs range between \$2,422,000 and \$2,862,000 at 10 and 30 percent project contingency rates with range differences attributable to cost methodology and quantity take-off measurements. The LRA cost estimates and CERL's findings are documented in Appendix B, Tables B.18 through B.21.

Need and Extent Findings for Golf Course Renovation

The existing 9-hole golf course is in need of improvement from drainage to infrastructure. Poor drainage and undefined fairways will deter public use of the course. The proposed LRA improvements to the golf course and the addition of another 9 holes will greatly improve the course's marketability to the public. In the same manner, the renovation of the existing Officers Club to a Pro Shop/restaurant will also increase the course's marketability. However, CERL does not agree with the need and extent to which these improvements should be made to increase the marketability of the surrounding parcels. On the other hand, CERL does agree with the LRA on the expansion and improvements for increasing the use of the golf course and the potential to generate funds for additional projects. Based on this discussion, the LRA has prepared a cost estimate for the following project associated with golf course expansion and improvement:

<u>Project</u>	<u>LRA Cost</u>
Construct an additional 9 holes	\$1,650,000
Renovation of the existing 9 holes	\$ 250,000
Construction of a maintenance shed	\$ 150,000
Renovation of the Officers Club to Pro Shop/Restaurant	\$ 200,000
<u>Updating of the infrastructure of the course</u>	<u>\$ 100,000</u>
Total	\$2,350,000

CERL's cost estimates for the proposed golf course expansion and improvements are as follow:

<u>Project</u>	<u>CERL 10%</u>	<u>CERL 30%</u>
Construct an additional 9 holes	\$1,271,000	\$1,502,000
Renovation of the existing 9 holes	\$ 869,000	\$1,027,000
Construction of a maintenance shed	\$ 152,655	\$ 180,411
Renovation of the Officers Club to <u>Pro Shop/Restaurant</u>	\$ 129,345	\$ 152,589
Total	\$2,422,000	\$2,862,000

CERL's cost for infrastructure improvements includes piping and piping systems that are included in the costs provided for construction of an additional nine holes and renovation of the existing nine holes.

Building Demolition and Disposal

The LRA proposes the demolition of 35 buildings totaling 106,298 SF. A demolition list is provided in the EDC Application, Appendix D and E. The LRA projected cost for this demolition is \$789,270. This cost is based on the estimate of \$5.00/SF demolition and disposal of an average building with \$5.00/SF additional disposal fees for those structures containing asbestos and/or lead-based paint. The LRA estimate assumed that 50 percent of the building material disposed of contains either lead-based paint or asbestos. CERL estimates that the costs for the demolition and disposal will range between \$973,600 and \$1,150,600 at 10 and 30 percent project contingency.

Need and Extent Findings for Building Demolition

CERL agrees with the LRA list of buildings scheduled for demolition and with the phasing of demolition. The CERL-developed cost estimate excludes salvage value and includes disposal fees. The difference between CERL's cost estimate and the LRA's cost appears to be professional opinion of the demolition office and light industry structures. In addition, the LRA assumed that 50 percent of the buildings contain environmentally sensitive materials. CERL's disposal cost reflects the results of the Environmental Baseline Survey study performed by Woodward-Clyde at Red River (report date 18 December 1996). These differences in costs for demolition of 106,298 SF amount to an average of \$7.40/SF estimated by the LRA and \$7.30/SF (unadjusted) estimated by CERL.

Soft Costs

Design, engineering, inspection and architectural fees are required to support the development, construction, and renovation work required for the conveyance of the EDC parcel of the Depot to the LRA. The cost for these support services is overstated in the EDC Application because the percentages that were used to calculate the fees (i.e., 21 percent) are well above the norms for this type of work (i.e., between 10 and 15 percent). Fees as proposed in the application total \$2,780,187. CERL estimates the requirement for these fees to range from \$1,539,000 to \$1,965,000, which places the percentage for fees within normally accepted ranges (i.e., approximately 11.5 percent).

Wetlands

The LRA has always assumed that it can fully develop all the available property to its highest and best use for the EDC to be successful. However, approximately 30 noncontiguous acres of regulated wetlands are scattered between parcels 1A, 1B, 1C, 1D, 2B, 3A, and 3C. The addition of the wetlands to the equation complicates matters, but will not stop the EDC from being successful if handled correctly. To handle this delicate situation, the LRA consulted with the Fort Worth District of the Corps of Engineers, and three environmental mitigation engineering firms (BRW, Geo Marine, and Murray, Thomas, and Griffin). With recommendations from these companies, the LRA proposes to slightly shift the re-developed acreage of each parcel to include more land for recreational purposes (e.g., landscaping and golf course expansion). This proposal will decrease the affected acreage to approximately 25 acres.

The LRA proposes a two-step process to mitigate this land. The first step is to perform a mitigation study and cost analysis, apply for and receive a mitigation permit, and then perform mitigation site engineering. The LRA estimates that this first step will take from 1 to 2 years.

The second step is to do the actual mitigation. The actual amount of land to be mitigated will depend on the results of step one (e.g., amount and types). For the purposes of the EDC, the LRA assumed that slightly over 25 acres were affected and will be mitigated into approximately 140 acres. The LRA estimates the total cost for steps one and two will range from \$556,000 to \$1,448,000. This cost includes only the price of the mitigation and not the purchase of any land because negotiations are underway with the Army to use the property in the "ammo" safety buffers as the mitigation land, since this land cannot be redeveloped.

Need and Extent Findings for Wetlands

CERL agrees with the LRA's proposed methodology to mitigate the land. However, CERL feels that an additional 10 percent contingency should be included in the price because of the high degree of uncertainty associated with mitigation, and to account for the buying of land in case they cannot use the land in the **ammo safety buffer zone**. Therefore, CERL estimates the mitigation costs should range from \$611,000 to \$1,593,000.

Conclusions

According to the EDC Application, the cost for capital improvement estimated by RRAD is approximately \$17 million. CERL's independent assessments suggest that the estimated costs will range from \$15 million to \$19 million for the scope of work proposed by the LRA; and from \$14 million to \$17 million based on the need and extent scenario determined by the CERL engineering team. Therefore, the costs presented by RRAD are determined to be reasonable compared to CERL's ranges of cost estimates.

6 Extent of State and Local Investment and Risk

Background

Local investment in the redevelopment of RRAD will involve significant development costs, including high capital expenditures, the majority of which arise from site development improvements. The EDC Application estimates total infrastructure principle costs of \$17 million programmed over 10 parcels, which are projected to be met partially through supportable real estate revenues. The balance is proposed to be met with 20-yr bond instruments. In addition to real estate revenues and debt financing, the Bowie County/Red River LRA has identified potential financial commitments from the state and county and the EDA and OEA totaling \$6.1 million.

Given the capacity of the RRAD redevelopment effort to generate revenue and proposed fiscal packaging, it is the opinion of CERL that the LRA EDC Business Plan stands a good chance of achieving financial feasibility, and a strong probability of accomplishing job creation goals.

Approach

CERL will discuss the extent of state and local investment risk associated with the redevelopment of RRAD, as well as the ability of the LRA to implement their reuse plan as proposed in the EDC Application.

Operational Investment and Risk

Investment

According to the LRA, the business plan pro forma effectively projects adequate revenues of \$31.9 million from real estate and OEA sources to offset operational expenditures of \$13.8 million throughout the 15-yr redevelopment period. This projection results in a 15-yr cumulative positive net operating cash flow of \$18.7

million, which is dedicated to general obligation and revenue bond debt service and capital improvements. The proposed level of operational investment is indeed substantial but, in most cases, is a prerequisite for the successful redevelopment of RRAD because of the need to attract quality end users and maintain a competitive office/industrial location.

Risk

The LRA's operational investments attempt to ensure that adequate resources will be available to meet the short- and long-term challenges of marketing the property to developers and to instill in investors the necessary level of confidence required for them to locate at RRAD. Operational risk is ostensibly associated with the capacity of the site to generate revenue, otherwise known as market risk. So long as RRAD generates sufficient revenues to offset required operational expenses, risk is somewhat reduced. However, as CERL noted in Chapter 4, **Business Plan Review and Market and Financial Feasibility**, the average operating expense ratio for the first 5 years of development is 32 percent. This ratio increases beginning in Year 6 due to the decreased revenues related to the sale of Buildings 333 and 312 and the related personal property.* Also, because the operating expenses decrease beginning in Year 9, the ratios again decline and stabilize over time. Thus, the greatest degree of operational risk exists during the middle phases of development when revenues decrease and operating expenses are high in an attempt to effectively market and manage the property.

Some factors that keep operational risk within reasonable ranges include the early presence of RRAD tenants such as the proposed Agriboard siting and the productive use of the golf facilities. In addition, CERL demonstrated in Chapter 4 that RRAD property absorption could likely be accelerated because of locational advantages and the availability of both greenfield sites and existing building stock.

* The operating expense ratio is real estate performance measurement, which simply divides total operating expenses by effective revenues. Generally, lower ratios connote more efficiently managed income producing properties, and thus, a greater capacity to generate NOI.

Capital Improvements

Investment

Chapter 5, Need and Extent of Proposed Infrastructure Improvements, provides an in-depth discussion of the LRA-proposed development infrastructure program provided in the EDC Application and reflected in the business plan pro forma. To summarize, the LRA proposes the following major improvements:

- \$4.28 million in road upgrades, new road construction, and signage
- \$0.82 million in site clearance and preparation
- \$0.10 million in street lighting
- \$2.35 million in golf course improvements
- \$0.79 million in building demolition
- \$2.90 million in building renovation costs
- \$4.73 million in soft costs and contingencies
- \$0.5 - \$1.4 million in wetlands mitigation.

In total, the LRA proposes nearly \$17 million in total infrastructure improvements (1999 dollars). Although CERL was able to independently verify total project infrastructure costs, some individual improvements were not found to fall within CERL's estimated range of cost reasonableness. Nevertheless, CERL finds that overall program costs range between \$15 million and \$19 million.

CERL finds the timing of these improvements to be prudent and reasonable. Phased improvements in the early years of redevelopment will primarily improve site transportation access, safety, and signage. Also, existing buildings are renovated by the LRA as they are absorbed, rather than programming building improvements before willing buyers or lessees are identified.

In addition to revenues generated from the sale and leasing of surplus EDC properties, the LRA has received commitments from county, state, and Federal

funding sources to support the redevelopment effort. The following is a summary list of expected financial support that CERL confirmed to be highly probable and appropriately attributable to the development project:

- County general obligation bonds not to exceed \$5.0 million to be used as matching funds to secure Federal infrastructure grants.
- County direct cash contributions up to \$0.325 million to leverage Federal matching funds.
- Revenue bonds backed by cash flows derived from utility systems and real estate proceeds to support new development and related infrastructure investments. Approximately \$15.0 million are contemplated in the business plan for a total of approximately \$20.0 million in total county bonding extended.
- The State of Texas has pledged to meet 80 percent of the LRA's local matching fund requirement to leverage EDA infrastructure grants. It is estimated that this contribution would amount to \$1.3 million (including utilities improvements).
- The total state and local contribution to the project is estimated to be approximately \$27 million. This level of investment is noteworthy in light of the expected Federal grant contribution of \$6.5 million in EDA infrastructure grants, plus near-term planning grant assistance from the OEA.

Adjustment for Utilities Systems

It should be noted that CERL was directed to exclude consideration of utilities-related issues from this evaluation. The extent of state and local investment discussed above applies to all aspects of the process including consideration of utilities improvements. CERL estimates that approximately 30 percent of total state and local investment would be directed towards utility system improvements (\$8.1 million). Therefore, an adjustment to the total investment contemplated in the EDC Application must be made. The resulting adjusted, anticipated state and local investment is approximately \$18.9 million.

Risk

The amount of investment and risk is indeed substantial, as evidenced by the LRA's proposed commitment to underwrite a substantial amount of project risk absorbing nearly \$17 million in estimated infrastructure costs. The ability of the

LRA to develop a quality industrial and business park that attracts end users over the long term, rests with required infrastructure investment that brings RRAD to marketable, code-compliant, and functional standards. Accordingly, infrastructure risk rests with the fiscal capacity of the LRA and the revenue-generating capability of the reuse effort in general. Market analysis has demonstrated a reasonable demand for RRAD facilities, including the early sale of Buildings 333 and 312 to AgriBoard, so risk associated with completed infrastructure improvements and insufficient RRAD end-user demand is somewhat reduced because of the strength of the market.

The LRA has phased infrastructure improvements in the early years of redevelopment, programming \$11.4 million of the total \$17 million (66 percent) in the first 5 years. This strategy reflects the early receipt of funds from the sale of Buildings 333 and 312 and allows the LRA to commit infrastructure investments as the market for RRAD property is being defined. Also, the LRA proposes the use of revenue bonds to fund infrastructure, which indicates that sufficient revenue must be available in order to generate support for such a financing mechanism. One risk that is difficult to predict is the local electorate's willingness to support bond financing in any form when those bond issues are subject to electoral processes. With this constraint in mind, CERL concludes that the probability that programmed infrastructure improvements will be completed in a timely manner and in concert with market demands is relatively high given the LRA's phasing strategy, anticipated revenue stream to directly fund improvements, and the willingness of the county to bond for needed improvements.

Conclusions

The level of investment and scope of redevelopment observed at RRAD is indeed substantial, when viewed in absolute terms, or relative to other EDC redevelopment efforts. The LRA has outlined an investment strategy, which soundly accommodates job creation goals while simultaneously reducing operating and infrastructure investment risks. CERL's scenarios suggest that the business plan is financially feasible and that sufficient revenues are available to provide consideration to the Army for the property. This fact alone suggests that the extent of state and local investment as well as the management approach to the project should be looked upon favorably by the Army in considering this application.

7 Local and Regional Real Estate Market Conditions

Background

The RRAD EDC Application and Comprehensive Reuse Plan for the installation relied heavily on real estate market analysis provided by The Appraisal Group of Texarkana, Texas, and RKG Associates, Inc. Independent data about the real estate market were difficult to collect because the region is not subject to public sale price disclosure requirements. Therefore, CERL relied heavily on interviews with The Appraisal Group and RKG representatives to validate their methodology and on discussions with local real estate brokers, business people, and community staff and officials. In addition, CERL conducted a cursory tour of the region in an effort to evaluate the extent of the real estate market and to observe market comparables in their geographic context. This chapter will disclose the results of these efforts and conclude that the local and regional real estate market conditions articulated in the EDC Application and comprehensive reuse plan are defensible.

Site Configuration

The surplus parcel at RRAD covers approximately 770 acres and is contiguous to the retained portion of RRAD and the Lone Star Army Ammunition Plant. Approximately 18 miles west of Texarkana, TX, and adjacent to the town of New Boston, the parcel is surrounded by remote, primarily agricultural land and open space. However, the parcel enjoys direct access to Interstate 30 and U.S. Hwy 82 and is proximate to several other U.S. highways that connect the region to other major population centers. The site enjoys two active rail providers with well-maintained spurs into the site. The facility parcel contains 98 significant buildings totaling 917,000 SF of floor space. The Army will lease 169,000 SF and another 106,276 SF is slated for demolition. Existing office space accounts for 250,000 SF, industrial space for 233,155 SF, and warehouse/storage space for 193,577 SF. The site's CMF buildings account for 355,563 SF. There are also 21 multi-family housing units. It is estimated that 31 buildings containing over

237,000 SF will be sold to the private sector. Figure 1 in the **Introduction** illustrates the site and its general configuration.

Market Analysis

As mentioned earlier, The Appraisal Group and RKG Associates produced the real estate market analysis for the region. The primary sources of information for this market research were the Texarkana Chamber of Commerce, a survey of nearly 500 Texarkana businesses, and interviews with various residential and commercial real estate brokers, economic development professionals, and elected officials throughout the region. Most of the data presented relates to Bowie County, as very little data existed for surrounding counties (e.g., Miller and Little River counties in Arkansas, and Red River and Cass counties in Texas) due to a lack of development activity in those counties. It should also be noted that no actual market analysis was done on the golf course. In this regard, the application lacks any hard data and is reliant on ballpark estimates by the consultant. Some consideration was given to a market study that was completed for the City of Texarkana in June 1994 by Golf Resource Associates as to the demand for annual golf rounds of play.

The market findings serve as the basis for developing annual property absorption and revenue projections from the sale of land and existing buildings, and interim buildings designated for leasing activity. The market research for this application was done during a time of strong economic growth in the Texarkana area. To the extent that the growth rate over the projection period varies from that at the time of the market research, the absorption and revenue results will also vary. Also, the market research was based on regional and local market factors only. There was no qualitative or quantitative examination of any particular building or parcel, except for Buildings 333 and 312, which were evaluated based on comparables from the Dallas market.

The EDC Application contemplates a 15-yr development program and anticipates that approximately 627,800 SF of existing employment-generating industrial, office, retail and service, warehouse, and distribution space will be sold or leased over the forecast period. This forecast is an average absorption rate of 41,800 SF/yr. Additionally, 860,800 SF of new space is to be developed by the LRA and the private sector over the forecast period, which is an average development of new space of roughly 57,400 SF/yr over the forecast period. This 57,400 SF of annual absorption is not supported in the market research, but is attributed to outside demand that the applicant did not attempt to estimate. Approximately 213 of the 493 acres planned for conveyance to the private sector

will be sold in the projection period, which is an average of 14.3 acres/yr. Land absorption and values were based on the assumption that necessary infrastructure and amenities programmed under the consolidated reuse plan would be in place. With these projected levels of development activity in mind, CERL will present a discussion of the specific real estate market segments below.

Industrial/Warehouse and Distribution Market

According to local brokers and the Texarkana Chamber of Commerce, the greatest real estate market demand is for industrial warehouse space. This demand is driven by several large industrial mills in the area: International Paper Co., Georgia Pacific-Nekoosa Paper, and Cooper Tire Co. Most leases are triple net (NNN) with the provision for an annual increase of 2 to 5 percent tied to the consumer price index. The term of these leases is typically 5 to 10 years with a 5-yr renewal option. In Texarkana, office/warehouse/manufacturing leases range from \$1.50 to \$4.50/SF. Warehouse/storage space leases are at about \$0.75 to \$1.80/SF. When there is a month-to-month lease, the price ranges from \$0.06 to \$0.15/SF/mo. Approximately 256,000 SF of warehouse/industrial/distribution space has been leased over the past 5 years. This figure is an average of 51,200 SF per year with typical individual leases being less than 15,000 SF. In evaluating Buildings 333 and 312, no local markets were comparable. The last large sale of any significance in the Texarkana area was in February 1996 when 176,410 SF of industrial/distribution space sold for \$1.25 million, or \$7.08/SF. The price of most of the industrial park land in Texarkana is established at \$10,000 – \$15,000 per acre by the Chamber of Commerce, the primary industrial development agent in the area. The Chamber has been able to set prices below the market value of the improved land by obtaining Federal subsidies for the infrastructure improvements.

The challenge for the LRA will be to aggressively and competitively price their land. Currently, three industrial parks will compete with RRAD for tenants. They are all located in the greater Texarkana area and are marketed and developed by the Texarkana Chamber of Commerce. Maxwell Industrial Park is the largest of the three parks with over 272 acres, of which 70 to 100 acres of prime land remain to be developed. Lot sizes range from 9 to 45 acres and are priced at \$10,000/acre. Twenty-six companies occupy nearly 3.0 million SF of space at the park. Maxwell Industrial Park is in an enterprise zone that offers special incentives to the companies located there. Falvey Industrial Park in southwest Texarkana has 129 of 165 acres currently developed. The remaining lots are from 1.6 to 9.2 acres and are priced at \$10,000/acre. Little development is expected in this park in the near future. Finally, Interstate 30 Industrial Park is in Nash, a growth area in Texarkana. This park contains approximately 170 acres adjacent

to Interstate 30 and has three tenants occupying 23,000 SF of building space on 77 developed acres. The 93 undeveloped acres are being marketed at \$15,000/acre. Much of the industrial development since 1985 has been driven by the expansion of large industrial complexes through onsite development, resulting in little demand for new space in the region.

The Texarkana Chamber of Commerce has received a number of inquiries for larger industrial buildings within the 25,000 to 75,000 SF ranges. Over a 2-wk period in February 1997, the Chamber received five serious inquiries for buildings with square footage totaling 260,000 SF of manufacturing/office space for which they had nothing to show. Local realtors report strong demand for warehouse and distribution space with access to major transportation routes. Commercial brokers believe that 200,000 SF of new space could be absorbed within 12 months, if such space were available. The Texarkana industrial market comprises largely small companies requiring 1,000 to 5,000 SF of space. Approximately 62 percent of the new industrial buildings constructed in Bowie County between 1985 and 1995 were less than 5,000 SF. Another 12 percent were between 5,000 and 10,000 SF. It is believed that a small segment of the market is looking for building sizes in the 25,000 to 75,000 SF range.

In summary, CERL estimates that the region's projected annual absorption of industrial space is 26 to 39 acres and 296,000 to 382,000 SF of building space per year. CERL also estimates that the surplus property can absorb 4 to 6 acres and 40,000 to 50,000 SF per year from the local industrial demand. Competing industrial parks currently have approximately 110 to 140 acres of developable land available. At a rate of 26 to 39 acres per year, this inventory will be absorbed in approximately 3 to 5 years. LRA property absorption should increase over time as the inventory of industrial park land decreases. The LRA property should also enjoy a locational advantage because of its close proximity to Interstate 30, a major east-west highway. For the purposes of business plan analysis, CERL used a market lease price range for existing industrial, warehouse, and distribution space of \$1.00 to \$3.50/SF. Sale prices for existing buildings range from \$8.00 to \$27.00/SF. Vacant land sales are estimated to average nearly \$17,000/acre with additional premiums of 30 to 35 percent charged for land with direct Hwy 82 or golf course access.

Commercial Office Market

According to The Appraisal Group, almost all speculative office and commercial activity has occurred in the northwest quadrant of the City of Texarkana, the latest emerging growth area for residential and commercial development in the area. Major developments include St. Michaels Hospital, Richmond Square,

Sam's Wholesale Club, Town West Shopping Center, and the Galleria office subdivision. The estimate is that 80,000 SF of speculative office space has been built since 1993 and that approximately 92 to 95 percent of the space is occupied with lease rates from \$9 to \$11/SF. Over the last 5 years, 155,000 SF of professional medical office space has been leased. Most leases are for 5 years at rates of approximately \$12/SF. Selected commercial sales of office space in the Texarkana market have averaged \$50/SF. Approximately 350,000 square feet of non-retail commercial space was built during 1994-95. The previous 5 years averaged approximately 100,000 SF/year. It is not expected that RRAD will attract many nonretail commercial tenants. Some types not dependent on location and customer visibility may be attracted to the site. These types would include telemarketers, mail order, and credit card and service type companies. Between 1985 and 1995, 52 percent of all non-retail commercial space was warehouse/storage. About 67 percent of that space was in the Texarkana area with another 25 percent in the New Boston-Hooks area. Smaller companies dominated this classification, as 76 percent of new commercial buildings were less than 5,000 SF. Only 28 nonretail commercial buildings of greater than 10,000 SF were developed since 1985. Recent trends project demand for nonretail commercial space to remain strong at 125,000 to 171,000 SF/yr. Little of this demand is expected to reach RRAD.

Five factors are critical to RRAD in attracting regional commercial development in the future. These factors are: (1) continued commercial development down Hwy 82 from New Boston, (2) the ability to make an attractive setting for businesses, (3) aggressive marketing and pricing, (4) the successful reuse of the CMF facilities, and (5) incentives and a sound management package to new businesses. Also, overcoming the property's military image and developing a small mixed-use industrial business park would accelerate development. Finally, the LRA will have to commit to making substantial improvements to the existing facilities to attract new tenants. They can do this by helping finance these improvements or offering rent concessions to prospective tenants. It is the applicant's estimate that RRAD can capture 2 to 3 percent of the regional office space and 5 percent of the commercial warehouse/storage market. These capture rates could be greater if the CMF buildings are occupied on a timely basis. CERL estimates lease prices for the existing commercial office buildings to be \$3.00 to \$5.00/SF with sales prices for existing buildings in the same class to be near \$25.00/SF.

Residential Market

The Texarkana and surrounding areas are currently experiencing a revived housing market. In 1990, 424 units sold at an average sale price of \$53,142. In

1995, 654 units sold at an average price of \$69,475. This is a 54 percent increase in annual units and a 31 percent increase in average price. Also, the average days that a listing was on the market went from 100 days in 1991 to 86 days in 1996. This demand for housing seems to be driven by the quality of schools and the availability of municipal water and sewer in the Texarkana area. New Boston, Maud, DeKalb, and Hooks also realized significant increases in housing demand due mainly to the new maximum-security prison developed just outside the New Boston area by the Texas Department of Criminal Justice. The prison employs 900 people. The price per acre for residential land ranges from \$12,000 to \$35,000. A developer has proposed to build 40 to 45 houses in DeKalb in the \$40,000 to \$60,000 ranges. They expect 95 percent of these units to be sold in 12 to 15 months after construction begins. DeKalb is 20 miles from RRAD. The same developer has proposed 60 to 75 units in the \$40,000 to \$60,000 range in Maud, 18 miles away. The Texarkana area experienced 62 percent of the new housing development from 1985 to 1996. Since 1985, however, Red Lick has experienced an 80 percent increase, Red Water a 35 percent increase, and Pleasant Grove a 30 percent increase in new home construction. The average size of a new house has increased from 1,844 SF in 1985 to 2,002 SF in 1994, with the sale price increasing from \$77,740 to \$113,670, respectively. Bowie County demand is expected to continue at 200 to 250 units per year. It is possible that the west side of the surplus property nearest to New Boston could be used for a subdivision development, although this was not proposed in the reuse plan. However, short-term rentals of existing housing will continue until such time as it is demolished to make room for light industrial expansion. Ultimately, the growth in demand for housing in the region should provide market support for the corresponding demand in the RRAD properties.

Golf Course

RRAD has an existing nine-hole golf course used primarily by the military, Depot personnel, members, and friends of RRAD. The course receives heavy use during peak periods. It is believed that expansion of this golf course to an 18-hole course would have significant positive effects on the redevelopment efforts of RRAD. The expansion would upgrade the image of the surplus property, thus helping the pace of development. No golf course study was done when the reuse plan was being developed. However, the consultants did utilize a market study done for the City of Texarkana in June 1994 by Golf Resource Associates. The purpose of that study was to determine the feasibility of a new public golf course in northwest Texarkana. The study showed that the Texarkana region is vastly under-served for the demand for annual golf rounds in the area. The study estimated that, by 1999, there would be annual demand for 210,000 rounds of golf within the area. It also estimated that the existing golf courses in the area could

handle 103,500 rounds annually. Thus, the unserved demand vastly exceeded that which could be accommodated by a new 18-hole golf course. Estimates indicate that a high-quality golf course could accommodate 33,000 rounds per year in the first year of operation and up to 40,000 rounds by the third year of operation.

Real Estate Market Conclusions

It is CERL's conclusion that the real estate market analysis approach and findings, presented by the applicant, as they relate to demand and competitive supply, are generally defensible. However, the applicant fails to adequately support their demand assumptions for absorption attributable to new construction. In addition to the absorption and sale of the existing land and buildings within the surplus property, an additional 860,800 SF of new space will be developed by the LRA and private sector developers. This assumption appears to be supported in the application by the expectation that market demand from outside the local area will drive this new development. However, the application specifically states that no market analysis was done outside of the local area. If this development indeed occurs, the applicant fails to illustrate how this could impact the absorption of existing space and vice versa. However, the LRA assumes that absorption of the vacant land will occur in the later years of the development project. Therefore, CERL has focused on the market feasibility and viability of the existing buildings. CERL concludes that sufficient market feasibility exists for existing buildings to support the LRA's job creation objectives.

8 Army Disposal Plan

As part of the EDC Application review process adopted by the BRAC office at HQUSACE and presented at the Corps of Engineers Real Estate Workshop in Denver, CO, in December 1995, CERL has been asked to defer comment on these issues to the Real Estate Directorate at HQUSACE and the Corps of Engineers District, Fort Worth, TX. In addition, both the negotiated process leading up to the submittal of the formal EDC Application and review of the legal environment related to real and personal property disposal are beyond the scope of CERL's technical review.

Future EDC reviews will continue to explore these issues insofar as they pertain to other elements of the technical review. Summaries of CERL's findings on these matters will be documented when appropriate and when requested by Army decision-makers.

9 Economic Benefit to the Federal Government

Introduction

One of the criteria for EDC applicant eligibility that may be considered by the Military Department is the economic benefit to the Federal Government that will be derived from the proposed EDC. The Military Department is asked to consider the protection and maintenance cost savings that would be avoided by a swift conveyance of the EDC parcel, as well as the anticipated consideration from the transfer. In the EDC application for RRAD, the Bowie County/Red River LRA has requested the EDC parcel without consideration to the Army. In addition, the applicant argues that, by rapidly divesting its responsibility for the RRAD, the Army may realize substantial operations and maintenance cost savings. In an attempt to independently evaluate these claims, CERL calculated the one-time layaway costs and annual maintenance and repair (M&R) costs associated with "mothballing" the facilities in the absence of an EDC. Also discussed here is the potential consideration for the property that could be defended in a negotiated arrangement.

Conclusions

Layaway and Annual M&R Cost Savings

Without a timely conveyance of the 770-acre EDC parcel after all Army uses for the property cease, CERL assumed that the Army would be compelled to mothball or "layaway" the facilities and infrastructure RRAD except for those uses being retained by the Federal Government. In addition, CERL assumed that M&R costs would be incurred to operate the existing utilities that support those Federal tenants. CERL estimated the cost of this layaway program using guidance spelled out in U.S. Army Center for Public Works Technical Note 420-10-08 and CERL Technical Report (TR) M-91/23, *Layaway Procedures for Facilities, Volume II: Inspection and Maintenance Repair Checklists*. The cost estimating

procedures were supplemented with information CERL gained from conversations with several RRAD facilities engineers and the experience of CERL researchers.

CERL estimated the layaway and annual M&R costs for the buildings and supporting infrastructure at RRAD based on three levels of layaway: Levels 1, 2, and 3. Each of these layaway levels corresponds to a decreasing level of care. For example, Layaway Level 1 would be used when the intent is to revive the facility at a later time with as little effort as possible (i.e., to support reuse by an LRA); whereas Level 3 assumes the building will be more or less abandoned (i.e., an approved reuse plan contemplates demolition, or no reuse for the property is obvious). Tables 9.1 and 9.2 give a range of values for the cost of one-time layaway followed by annual M&R for each of the described layaway levels. An expanded discussion of these one-time layaway costs and annual M&R costs follows.

Table 9.1. One-time layaway cost estimates for RRAD.

Layaway Level 3		Layaway Level 2		Layaway Level 1	
Total minimum	Total high	Total minimum	Total high	Total minimum	Total high
\$61,378	\$122,756	\$161,118	\$281,956	\$119,429	\$238,857

Table 9.2. Annual M&R cost estimates for RRAD.

M&R Level 3		M&R Level 2		M&R Level 1	
Total minimum	Total high	Total minimum	Total high	Total minimum	Total high
\$53,218	\$106,435	\$175,618	\$307,332	\$325,790	\$586,422

Layaway Level 1

In this layaway level, buildings are laid away, secured, frequently inspected, repaired, and have most utilities active. The intent of this level of layaway is to reactivate the facility at a later date with as little effort as possible. Buildings are heated at 55 °F in the winter and cooled to 80 °F in the summer.

Annual M&R in the years following the one-time layaway would include a security force patrolling the area, a small interdisciplinary workforce to inspect the infrastructure systems frequently and make necessary repairs, and a regular landscape and maintenance schedule.

Layaway Level 2

In this level of layaway, buildings are laid away, secured, frequently inspected, repaired, and have most utilities shut off. The intent of this level of layaway is

to simply have the facility available for future use. Utilities will be maintained on an “as-needed” basis by the security force, inspectors, and caretaker force.

Annual M&R in the years following the one-time layaway would include a security force patrolling the area, a small interdisciplinary caretaker force that would inspect the infrastructure systems annually and make minor repairs, and a regular landscape maintenance schedule.

Layaway Level 3

This level of layaway is called the “do nothing” level as outlined in CERL TR M-91/23, *Layaway Procedures for U.S. Army Facilities, Volume 1: Decision Criteria and Economics*. Simply stated, the installation personnel will “lock the door as they leave the building,” abandon the facility, and do no maintenance on the infrastructure. Buildings will have the personal items removed, be cleaned (swept/mopped), and be secured. Utilities will be abandoned or cut in place.

Level 3 annual M&R is minimal. However, security for the installation will still be required, with some facilities to house the security force and some minor landscape maintenance.

Probable Layaway and M&R Program in the Absence of an EDC

If the EDC is not approved in a timely manner, and the Army is forced to continue its caretaker function at RRAD, it is likely that the Army would be required to maintain the property to allow for parcelization and redevelopment of the base in accordance with the RRAD Reuse Plan. Therefore, the probable layaway and M&R program for the EDC parcel would likely include layaway and M&R consistent with the requirements of Level 1 to ensure rapid property transfer through willing buyers. Table 9.3 shows a range of costs for this scenario.

Table 9.3. Likely Army layaway and M&R commitments.

	LAYAWAY LEVEL ONE	
	Total minimum	Total high
EDC Parcel	\$119,429	\$238,857
M&R LEVEL ONE		
	Total minimum	Total high
EDC Parcel	\$325,790	\$586,422
Total	\$445,219	\$825,279

Based on the projected costs given in Table 9.3, the Army could expect to incur at least \$325,790 in annual carrying costs for RRAD in the absence of an EDC. Since the LRA is prepared to assume responsibility for the property as soon as possible, the Army should consider an O&M cost avoidance to the extent that a successful conveyance cannot be achieved in a timely manner.

Anticipated Consideration From the Conveyance

Summary of LRA Proposal

The LRA Application proposes to receive the 770-acre EDC parcel and supporting water, sewer, drainage, gas, electric, communications, and internal roadway systems without consideration to the Army. The applicant argues that this is an appropriate consideration to the Army for the following reasons:

1. Under a private sector approach to redevelopment, without substantial subsidy, bonds, or grant funding, likely business plan valuation estimates would be negative.
2. Substantial levels of investment are required to achieve economic development goals.
3. The valuation of the business plan as promoted by the LRA ranges from *negative* \$1.5 million to *negative* \$2.8 million (including utilities systems conveyance)
4. The Army will receive indirect monetary benefits as a result of the expedited transfer of RRAD through cost avoidance.

CERL Recommendation

The LRA has proposed to underwrite approximately \$18.9 million in infrastructure costs associated with the redevelopment of RRAD. Operating costs and a portion of the capital costs are anticipated to be offset with real estate revenue, and state and Federal grants. The LRA's anticipated return from investment is the creation of over 2,900 jobs facilitated through a quality industrial and business park. CERL's analysis concludes that the LRA has a high probability of achieving investment levels and job creation goals.

Based on the eligibility factors/criteria reviewed for this report, it is the opinion of CERL engineers that the applicant is eligible for an EDC. CERL recommends

that the Army consider up to \$825,279 in facility layaway and annual M&R costs when negotiating the final terms and conditions of the conveyance. It is also the recommendation of CERL that the Army look favorably upon the LRA's substantial level of investment, which will likely create over 2,900 jobs, when deciding if a discount from FMV is warranted. Finally, CERL's estimated range of business plan value is *positive* \$1.2 million to \$1.5 million, which contrasts with the LRA's offer of zero consideration. It should be noted, however, that the LRA's ability to pay rests largely with the magnitude and time of the Bldg. 312 and 333 sale to Agriboard.

CERL recommends that the Army approve the EDC and negotiate for consideration. The Army should consider the LRA's willingness to transfer property rapidly in light of O&M cost avoidance. However, the Army should protect against the LRA's requested phasing of parcels that are not encumbered by operational or environmental issues.

10 Review of Application for Completeness

This chapter summarizes CERL's review of the Red River Local Redevelopment Authority's EDC Application for completeness as required by 32 CFR Part 91.7(e)(5). In general, the application package was very difficult to review because the applicant failed to simply comply with the structure and order of the application contents found in the regulation. The contents of the requirements are listed below in italics, followed by CERL's findings.

1. *Copy of the adopted Reuse Plan.* A copy of the plan is included.
2. *Project narrative, including:*
 - a. *General description of the property requested.* Section 2.1 of the application describes the property description of surplus property that could be offered to the private sector for development. Indirectly, CERL was able to discern that between the application, reuse plan inventory and analysis (Chapter 3) and the building database in Chapter 10 of the Reuse Plan that all surplus Army property was accounted for. Properties such as the utility systems that are on the Army's conditional report of excess are not conclusively addressed. CERL recommends that the Army require a supplement to the EDC that provides a definitive description of all property requested under the EDC. At the present time, and for the purposes of the analysis contained within this report, CERL assumed that the LRA would obtain all land, buildings, and improvements within the surplus parcel and as described in Map 2.3 "Conveyance/Phasing Plan" presented in the LRA's application. Also for the purposes of this review and at the request of DAIM-BO, CERL excluded the transfer of any utility system request.
 - b. *Description of intended uses.* No specific section of the application deals explicitly with this topic. However, Chapter 5 of the Reuse Plan – Market Potential for Reuse – and Section 2.2 of the application address the market potential for the property focusing largely on the undeveloped parcels.
 - c. *Description of the economic impact of the closure on local communities.* The application document does not contain any discussion of this topic.

However, Chapter 4 of the Reuse Plan – Economic Impact Assessment provides a discussion that was evaluated and is reported in Chapters 1 and 2 of CERL's findings.

- d. *Description of the financial condition of the community.* The applicant fails to provide this statement in the original application. Discussions with county executives and subsequent correspondence represent a financial willingness to support the project. However, bond issues that require referenda for passage may be more difficult to produce based on recent historical precedent. The community has demonstrated the wherewithal to mobilize Federal and state support for the project as is evidenced in their commitment of state infrastructure funds and Federal legislation on the utilities issue. In comparison to several other EDC's CERL has had experience working with, the LRA has the political organization and expertise to mobilize aggressive efforts to secure appropriate financial support.
 - e. *Statement of how the EDC is consistent with the overall Reuse Plan.* There is scattered discussion in the application related to changes or inconsistencies with the Reuse Plan. One example is the discussion of boundary revisions for parcels outlined on page 48 of the application. This lack of a centralized, cogent discussion of Reuse Plan consistency made the application very difficult to review.
3. *Description of how the EDC will contribute to short- and long-term job creation and economic redevelopment.* A detailed 15-year employment projection for RRAD was included in Section 4 of the application.
4. *Business and development plan for the EDC parcel, including:*
- a. *Development plan, timetable, phasing plan and cash flow analysis.* Provided.
 - b. *Market and financial feasibility analysis.* Provided.
 - c. *Cost estimate or justification for infrastructure and other investments needed for development of the EDC parcel.* Provided.
 - d. *Local investment and proposed financing strategies for development.* Federal and state grant funds supplement a local bond financing strategy for capital improvements. A review of the proposed business plan indicates that debt service is supported through operating revenues.

5. *Statement describing why other authorities - such as negotiated or public sale cannot be used to accomplish the economic development and job-creation goals.* A statement is provided.
6. *If a transfer is requested for less than fair market value...then a statement should be provided justifying a discount.* The applicant provides a valuation analysis that argues for a valuation of the business plan between *negative* \$1.5M and *negative* \$2.8M. One can assume that this is the applicant's representation of such a justification.
7. *Statement of the LRA's legal authority to acquire and dispose of the property.* A statement of legal authority is provided.

Appendix A: Operations and Business Plan Analyses

 Table A.1. Buildings and Land Inventory.

EDC Building and Land Inventory Red River Army Depot

Building Number	Land Use District	Proposed Action	Proposed Reuse	Acreage	Construction	Square Feet	Current Use
312	Phase 1	Reuse	Whse/Stor	0	metal	126,706	Whse/Stor
333	Phase 1	Reuse	Ind	0	metal	218,857	Ind
333A	Phase 1	Reuse	Whse/Stor	0	metal	4,000	Whse/Stor
334A	Phase 1	Reuse	Whse/Stor	0	metal	6,000	Whse/Stor
342	Phase 1	Reuse	Office/Admin	0	metal	4,000	Office/Admin
77	Phase 1	Reuse	Golf Course	0	metal	4,000	Golf Course
85	Phase 1	Reuse	Golf Course	0	masonry	13,420	Golf Course
85A	Phase 1	Reuse	Golf Course	0	wood	360	Golf Course
S-87	Phase 1	Demo	Golf Course	0	wood	240	Golf Course
M82	Phase 1	Reuse	Golf Course	0	wood	400	Golf Course
M84	Phase 1	Reuse	Golf Course	0	wood	400	Golf Course
T80	Phase 1	Demo	Golf Course	0	wood	900	Golf Course
10	Phase 1	Reuse	Housing	0	wood	1,447	Housing
20	Phase 1	Reuse	Housing	0	wood	4,021	Housing
28	Phase 1	Reuse	Housing	0	wood	3,469	Housing
30	Phase 1	Reuse	Housing	0	wood	3,469	Housing
34	Phase 1	Reuse	Housing	0	wood/masonry	3,403	Housing
40	Phase 1	Reuse	Housing	0	wood	3,403	Housing
702	Phase 1	Demo	Housing	0	wood	5,120	Housing
704	Phase 1	Demo	Housing	0	wood	10,112	Housing
705	Phase 1	Demo	Housing	0	wood	4,246	Housing
707	Phase 1	Demo	Housing	0	wood	4,246	Housing
708	Phase 1	Demo	Housing	0	wood	1,835	Housing
710	Phase 1	Demo	Housing	0	wood	3,780	Housing
715	Phase 1	Demo	Housing	0	wood	4,379	Housing
717	Phase 1	Demo	Office/Admin	0	wood	4,379	Housing
11	Phase 1	Reuse	Office/Admin	0	metal	5,000	Office/Admin
12	Phase 1	Reuse	Office/Admin	0	metal	4,000	Office/Admin
107	Phase 1	Reuse	Office/Admin	0	metal	5,000	Office/Admin
S-07	Phase 1	Reuse	Chapel	0	wood	3,992	Chapel
Subtotal						454,484	
108	Phase 2	Reuse	Credit Union	0	metal	6750	Credit Union
110	Phase 2	Reuse	Admin	0	block	48254	Admin
112	Phase 2	Demo	Housing	0	metal/masonry	31805	Housing
57	Phase 2	Reuse	Child Care	0	wood/masonry	4500	Child Care
2	Phase 2	Demo	Sentry	0	metal	68	Sentry
3	Phase 2	Demo	Sentry	0	brick	217	Sentry
135	Phase 2	Reuse	Rec	0	metal/masonry	15754	Rec
S58	Phase 2	Demo	Child Care	0	wood	2765	Child Care
S713	Phase 2	Demo	Maint	0	wood	4136	Maint
S727	Phase 2	Demo	Whse/Stor	0	wood/metal	280	Whse/Stor
183	Phase 2	Demo	Ind	0	masonry	640	Ind
	Phase 2	Reuse	Army	0	metal	17955	Army
115							

110	0	block	4854	Housing	31805
112	0	metal/masonry	31805	Child Care	4500
57	0	wood/masonry	0	Sentry	4500
2	0	metal	0	Rec	0
3	0	brick	68	Child Care	0
135	0	metal/masonry	217	Maint	0
S58	0	wood	15754	Wheel/Stor	0
S713	0	wood	2765	Ind	0
S727	0	wood	4136	Army	0
116A-E	0	wood/metal	280	Army	0
183	0	masonry	840	Army	0
115	0	metal	17955	Army	0
21A	0	metal	24000	Army	0
21	0	metal	14738	Army	0
300A	0	wood	31267	Army	0
300	0	wood	3617	Army	0
Phase 2	0	wood	2600	Army	0
Phase 2	0	wood	1,440	Army	0
Phase 2	0	wood	12,106	Army	0
Subtotal	0		222,892		
Phase 3	113		0	203	Sewer Lift
Phase 3	125		0	1,075	Ind/Maint
Phase 3	133		0	13,654	Ind/Maint
Phase 3	137		0	480	Admin
Phase 3	138		0	160	Portable
Phase 3	139		0	2576	Dispatch
Phase 3	150		0	12490	Wheel/Stor
Phase 3	154		0	19228	Maint
Phase 3	162		0	400	Gas Station
Phase 3	184		0	4298	Print Plant
Phase 3	186		0	435	Oil Stor
Phase 3	168		0	1530	Maint
Phase 3	170		0	11021	Admin
Phase 3	175		0	1600	Office/Admin
Phase 3	176		0	517	Heat Plant
Phase 3	186		0	0	Cement Plant
Phase 3	238		0	17950	Stor
S123	0		0	19366	Maint
S161	0		0	684	Gym
S163	0		0	280	Maint
S167	0		0	280	Whse/Stor
S168	0		0	480	Admin
S177	0		0	280	Thrift Shop
S178	0		0	280	Admin
S180	0		0	540	Stor
219	0		0	240	Maint
222	0		0	336	Maint
228	0		0	11477	Stor
245	0		0	15827	Acethylene Shed
256	0		0	252	Stor
260	0		0	4800	Maint
274	0		0	6000	Stor
275	0		0	1350	Stor
Phase 3	0		0	196	Acethylene Shed
Phase 3	0		0	196	Stor
Phase 3	0		0	9880	Stor
Phase 3	0		0	600	Stor
Phase 3	0		0	250	Stor
Phase 3	0		0	648	Stor
Phase 3	0		0	6300	Maint
Phase 3	0		0	1920	Maint
Phase 3	0		0	0	Sewer Lift
Phase 3	0		0	4000	Admin
Phase 3	0		0	982	Stor
Phase 3	0		0	540	Admin
Phase 3	0		0	8200	Stor
Phase 3	0		0	0	Sewer Lift
Phase 3	0		0	6810	Army
Phase 3	0		0	37848	Army

3

Table A.2. Absorption and revenues summary.

**15-Year Absorption and Revenue Projection
Red River Army Depot**

Scenario: RRAD Recast

	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6 2003	Year 7 2004	Year 8 2005	Year 9 2006
ABSORPTION									
Existing Leased Space (SF)									
Interim Lease									
Main Buildings & Heavy Ind. Site	-	-	9,000	9,000	9,000	9,000	-	-	6,750
Building 333	-	-	218,857	218,857	218,857	218,857	-	-	164,143
Building 312	-	63,353	126,706	126,706	126,706	126,706	-	-	95,030
Parcel 1-B									
Golf Course Expansion Site	8,001	12,002	16,002	16,002	16,002	16,002	16,002	16,002	16,002
Temporary Lease Properties	1,040	1,040	1,040	1,040	1,040	1,040	-	-	-
Parcel 1-E									
Retail Comm-Community Center Site	8,508	8,508	8,508	8,508	8,508	8,508	8,508	8,508	8,508
Temporary Lease Properties	911	1,823	3,645	-	-	-	-	-	-
Parcel 2-A									
Temporary Lease Properties	-	-	22,800	30,400	30,400	30,400	-	-	-
Parcel 3-A									
Temporary Lease Properties	-	-	25,980	32,450	25,980	25,980	17,307	8,653	-
Parcel 3-B									
Temporary Lease Properties	-	-	21,350	35,684	28,467	21,350	14,233	7,117	-
Total Leased Space	18,460	86,726	453,868	478,647	464,960	456,803	56,050	40,280	280,433
Existing Building Sales (SF)									
Parcel 1-A	-	-	-	-	-	-	-	-	-
Heavy Industrial Site	-	4,000	-	-	-	-	-	-	-
Parcel 1-E	-	-	12,465	12,465	-	-	-	-	-
Retail Comm-Community Center Site	-	-	-	2	-	-	-	-	-
Circle Drive Housing	-	-	-	-	4,500	-	-	-	-
Temporary Lease Properties	-	-	-	-	-	-	-	-	-
Parcel 2-A	-	-	-	-	-	-	48,254	-	-
Temporary Lease Properties	-	-	-	-	-	-	-	-	-
Parcel 3-A	-	-	-	1,582	1,582	1,582	1,582	1,582	12,820
Business/Industrial Development Site	-	-	-	-	12,820	12,820	12,820	12,820	12,820
Temporary Lease Properties	-	-	-	-	-	-	-	-	-
Parcel 3-B	-	-	-	-	-	-	3,635	3,635	-
Heavy Industrial Development Site	-	-	-	-	-	-	-	10,543	10,543
Temporary Lease Properties	-	-	-	10,543	10,543	10,543	10,543	10,543	10,543
Annual Building Absorption	-	4,000	14,047	37,412	29,445	28,580	76,834	23,363	23,363
Cumulative Building Absorption	-	4,000	18,047	55,459	84,904	113,484	190,318	213,681	237,044
Existing Land Sales (Acres)									
Parcel 1-A	-	-	-	-	-	-	-	-	-
Heavy Industrial Site	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Parcel 1-C	-	-	-	-	-	-	-	-	-
Runnels/Bus/Light Ind Development	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5
Parcel 1-D	-	-	-	-	-	-	-	-	-
Warehouse & Light Ind Development Site	0.0	0.0	0.0	7.6	7.6	7.6	7.6	7.6	7.6
Parcel 1-E	-	-	-	-	-	-	1.9	1.9	1.9
Retail Comm-Community Center Site	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-
Parcel 2-A	-	-	-	-	-	-	-	-	-
Business/Light Industrial Development S	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1
Parcel 2-B	-	-	-	-	-	-	-	-	-
Business/Light Industrial Development S	0.0	0.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Parcel 3-C	-	-	-	-	-	-	-	-	-
Heavy Ind w/ Main Bldgs & Treatment Pl	0.0	0.0	0.0	2.5	2.5	2.5	2.5	2.5	2.5
Annual Land Absorption	-	0.0	1.5	3.3	13.4	14.5	14.5	16.4	19.9
Cumulative Land Absorbed	-	0.0	1.5	4.8	18.2	32.7	47.2	63.6	99.9
REVENUES									
Existing Leasable Space (SF)									
Interim Lease									
Main Buildings & Heavy Ind. Site	\$ -	\$ -	\$ 4,682	\$ 4,775	\$ 4,871	\$ 4,968	\$ -	\$ -	\$ 3,954
Building 333	\$ -	\$ -	\$ 766,000	\$ 812,885	\$ 829,142	\$ 845,725	\$ -	\$ -	\$ 673,119
Building 312	\$ -	\$ 64,620	\$ 131,825	\$ 134,461	\$ 137,151	\$ 139,894	\$ -	\$ -	\$ 111,343
Parcel 1-B									
Golf Course Expansion Site	\$ 33,204	\$ 50,804	\$ 69,091	\$ 70,473	\$ 71,882	\$ 73,320	\$ 74,787	\$ 76,282	\$ 77,808
Temporary Lease Properties	\$ 374	\$ 382	\$ 390	\$ 397	\$ 405	\$ -	\$ -	\$ -	\$ -
Parcel 1-E									
Retail Comm-Community Center Site	\$ 25,524	\$ 26,034	\$ 26,555	\$ 27,086	\$ 27,628	\$ 28,181	\$ 28,744	\$ 29,319	\$ 29,905
Temporary Lease Properties	\$ 4,555	\$ 9,297	\$ 18,961	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Parcel 2-A									
Temporary Lease Properties	\$ -	\$ -	\$ 118,606	\$ 161,304	\$ 164,530	\$ 167,820	\$ -	\$ -	\$ -
Parcel 3-A									
Temporary Lease Properties	\$ -	\$ -	\$ 27,819	\$ 35,469	\$ 28,965	\$ 29,545	\$ 20,075	\$ 10,238	\$ -
Parcel 3-B									
Temporary Lease Properties	\$ -	\$ -	\$ 45,091	\$ 76,872	\$ 62,552	\$ 47,851	\$ 32,538	\$ 16,596	\$ -
Annual Lease Revenues	\$ 63,658	\$ 151,138	\$ 1,209,020	\$ 1,323,724	\$ 1,327,126	\$ 1,337,304	\$ 156,144	\$ 132,435	\$ 896,129
Cumulative Lease Revenues	\$ 63,658	\$ 214,796	\$ 1,423,815	\$ 2,747,539	\$ 4,074,665	\$ 5,411,969	\$ 5,568,114	\$ 5,700,548	\$ 6,596,678
Existing Building Sales (SF)									

(1)

Year s 2005	Year 9 2006	Year 10 2007	Year 11 2008	Year 12 2009	Year 13 2010	Year 14 2011	Year 15 2012	Cumulative Forecast		
								5 Year Total	10 Year Total	15 year Total
-	6,750	9,000	9,000	9,000	9,000	9,000	9,000	27,000	51,750	96,750
-	154,143	218,857	218,857	218,857	218,857	218,857	218,857	656,571	1,258,428	2,352,713
-	95,030	107,700	107,700	107,700	107,700	107,700	107,700	443,471	772,907	1,311,407
16,002	16,002	16,002	16,002	16,002	16,002	16,002	16,002	68,009	148,019	228,029
-	-	-	-	-	-	-	-	5,200	5,200	5,200
8,508	8,508	8,508	8,508	8,508	8,508	8,508	8,508	42,540	85,080	127,620
-	-	-	-	-	-	-	-	6,379	6,379	6,379
-	-	-	-	-	-	-	-	83,600	114,000	114,000
8,653	-	-	-	-	-	-	-	84,390	136,330	136,330
7,117	-	-	-	-	-	-	-	85,501	128,201	128,201
:280	290,433	360,067	360,067	360,067	360,067	360,067	360,067	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	24,930	24,930	24,930
-	-	-	-	-	-	-	-	2	2	2
-	-	-	-	-	-	-	-	4,500	4,500	4,500
-	-	-	-	-	-	-	-	-	48,254	48,254
-	-	-	-	-	-	-	-	-	7,910	7,910
2,820	12,820	-	-	-	-	-	-	-	76,920	76,920
-	-	-	-	-	-	-	-	-	7,270	7,270
0,543	10,543	-	-	-	-	-	-	84,904	237,044	237,044
3,363	23,363	-	-	-	-	-	-	-	-	-
3,681	237,044	237,044	237,044	237,044	237,044	237,044	237,044	-	-	-
1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.0	6.0	13.5	19.5
0.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	0.0	0.0	0.0
7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	15.2	53.2	91.2
1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	0.0	0.0	0.0
1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	6.6	12.1
1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	5.4	14.4	23.4
2.5	2.5	2.5	2.5	2.5	2.5	0.0	0.0	5.0	17.5	25.0
16.4	19.9	19.9	19.9	19.9	19.9	17.4	15.9	32.7	119.8	212.8
80.0	99.9	119.8	139.7	159.6	179.5	196.9	212.8	-	-	-

-	\$ 3,954	\$ 5,378	\$ 5,485	\$ 5,595	\$ 5,707	\$ 5,821	\$ 5,938	\$ 14,328	\$ 28,629	\$ 57,175	
-	\$ 673,119	\$ 915,440	\$ 933,749	\$ 952,424	\$ 971,473	\$ 990,902	\$ 1,010,720	\$ 2,408,027	\$ 4,842,311	\$ 9,701,579	
-	\$ 111,343	\$ 128,711	\$ 131,286	\$ 133,911	\$ 136,590	\$ 139,321	\$ 142,108	\$ 468,057	\$ 848,005	\$ 1,531,221	
-	\$ 6,282	\$ 77,808	\$ 79,364	\$ 80,951	\$ 82,570	\$ 84,222	\$ 85,906	\$ 87,624	\$ 295,455	\$ 677,016	\$ 1,098,290
-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,948	\$ 1,948	\$ 1,948	
-	\$ 9,319	\$ 29,905	\$ 30,504	\$ 31,114	\$ 31,736	\$ 32,371	\$ 33,018	\$ 33,678	\$ 132,828	\$ 279,481	\$ 441,397
-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 32,814	\$ 32,814	\$ 32,814	
-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
-	\$ 0,238	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 444,439	\$ 612,259	\$ 612,259	
-	\$ 6,596	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 92,254	\$ 152,111	\$ 152,111	
-	\$ 12,435	\$ 896,129	\$ 1,159,397	\$ 1,182,585	\$ 1,206,237	\$ 1,230,362	\$ 1,254,969	\$ 1,280,068	\$ 184,515	\$ 281,501	\$ 281,501
-	\$ 0,548	\$ 6,596,678	\$ 7,756,075	\$ 8,938,660	\$ 10,144,897	\$ 11,375,259	\$ 12,630,228	\$ 13,910,296	\$ 4,074,665	\$ 7,756,075	\$ 13,910,296

(2)

Table A.2. Absorption and revenues summary.

Parcel 1-A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Heavy Industrial Site	\$ -	\$ -	\$ 81,600	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Parcel 1-E	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retail Comm-Community Center Site	\$ -	\$ -	\$ -	\$ 324,215	\$ 330,699	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Circle Drive Housing	\$ -	\$ -	\$ -	\$ -	\$ 133,712	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Temporary Lease Properties	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 121,774	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Parcel 2-A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 869,469	\$ -	\$ -
Temporary Lease Properties	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Parcel 3-A	\$ -	\$ -	\$ -	\$ -	\$ 23,043	\$ 23,504	\$ 23,974	\$ 24,453	\$ 24,942	\$ -	\$ -	\$ -	\$ -
Business/Industrial Development Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 54,419	\$ 55,507	\$ 56,617	\$ 57,750	\$ 58,905	\$ 60,083	\$ -	\$ -
Temporary Lease Properties	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Parcel 3-B	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 60,200	\$ 61,404	\$ -
Heavy Industrial Development Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Temporary Lease Properties	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 89,507	\$ 91,297	\$ 93,123	\$ 94,985	\$ 96,885	\$ 98,822	\$ -	\$ -
Annual Building Sales Revenues	\$ -	\$ -	\$ 81,600	\$ 347,257	\$ 631,840	\$ 252,551	\$ 234,393	\$ 1,108,550	\$ 155,789	\$ 158,905	\$ -	\$ -	\$ -
Cumulative Building Sales Revenues	\$ -	\$ -	\$ 81,600	\$ 428,857	\$ 1,060,697	\$ 1,353,249	\$ 1,587,642	\$ 2,696,192	\$ 2,851,981	\$ 3,010,886	\$ -	\$ -	\$ -

Existing Land Sales (Acres)

Parcel 1-A	\$ -	\$ -	\$ 22,725	\$ 22,952	\$ 23,182	\$ 23,414	\$ 23,648	\$ 23,884	\$ 24,123	\$ 24,364
Heavy Industrial Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Parcel 1-C	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 56,850
Runnels/Bus/Light Ind Development	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 97,879	\$ 98,857	\$ 99,846	\$ 100,844	\$ 101,853
Parcel 1-D	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 102,871
Warehouse & Light Ind Development Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Parcel 1-E	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 70,591	\$ 71,297
Retail Comm-Community Center Site	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 72,010
Parcel 2-A	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 17,170	\$ 17,342	\$ 17,515	\$ 17,690
Business/Light Industrial Development S	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 17,867
Parcel 2-B	\$ -	\$ -	\$ -	\$ -	\$ 27,543	\$ 27,818	\$ 28,096	\$ 28,377	\$ 28,661	\$ 28,948
Business/Light Industrial Development S	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 29,237
Parcel 3-C	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 38,636	\$ 39,023	\$ 39,413	\$ 39,807	\$ 40,205
Heavy Ind w/ Main Bldgs & Treatment Pl:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 40,607
Annual Land Sales Revenues	\$ -	\$ -	\$ 22,725	\$ 50,495	\$ 187,515	\$ 206,560	\$ 208,625	\$ 281,303	\$ 284,116	\$ 343,807
Cumulative Land Sales Revenues	\$ -	\$ -	\$ 22,725	\$ 73,220	\$ 260,735	\$ 467,295	\$ 675,920	\$ 957,223	\$ 1,241,339	\$ 1,585,146

Existing Leased Space (SF)

	Base Lease Rate
Interim Lease	
Main Buildings & Heavy Ind. Site	0.50
Building 333	3.50
Building 312	1.00
Parcel 1-B	
Golf Course Expansion Site	4.15
Temporary Lease Properties	0.36
Parcel 1-E	
Retail Comm-Community Center Site	3.00
Temporary Lease Properties	5.00
Parcel 2-A	
Temporary Lease Properties	5.00
Parcel 3-A	
Temporary Lease Properties	1.03
Parcel 3-B	
Temporary Lease Properties	2.03

Existing Building Sales (SF)

	Price/SqFt
Parcel 1-A	
Heavy Industrial Site	\$ 20
Parcel 1-E	
Retail Comm-Community Cent	\$ 25
Circle Drive Housing	\$ 63,000
Temporary Lease Properties	\$ 25
Parcel 2-A	
Temporary Lease Properties	\$ 16
Parcel 3-A	
Business/Industrial Developmer	\$ 14
Temporary Lease Properties	\$ 4
Parcel 3-B	
Heavy Industrial Development S	\$ 15
Temporary Lease Properties	\$ 8

Existing Land Sales (Acres)

	Price/Acre
Parcel 1-A	
Heavy Industrial Site	\$ 15,000
Parcel 1-C	
Runnels/Bus/Light Ind Develop	\$ 15,000
Parcel 1-D	
Warehouse & Light Ind Develop	\$ 12,500
Parcel 1-E	
Retail Comm-Community Cent	\$ 35,000
Parcel 2-A	
Business/Light Industrial Devel	\$ 15,000
Parcel 2-B	
Business/Light Industrial Devel	\$ 15,000
Parcel 3-C	
Heavy Ind w/ Main Bldgs & Tre	\$ 15,000

(1)

364 \$	24,608 \$	24,854 \$	25,103 \$	25,354 \$	25,607 \$	-	\$	92,273 \$	212,900 \$	313,817 \$
850 \$	57,418 \$	57,993 \$	58,573 \$	59,158 \$	59,750 \$	60,347 \$	\$	- \$	114,268 \$	410,089 \$
871 \$	103,900 \$	104,939 \$	105,988 \$	107,048 \$	108,119 \$	109,200 \$	\$	196,736 \$	706,051 \$	1,241,346 \$
010 \$	72,730 \$	73,457 \$	74,192 \$	74,934 \$	75,683 \$	76,440 \$	\$	- \$	286,628 \$	661,335 \$
867 \$	18,046 \$	18,226 \$	18,409 \$	18,593 \$	18,779 \$	18,966 \$	\$	17,170 \$	105,630 \$	198,602 \$
237 \$	29,530 \$	29,825 \$	30,123 \$	30,424 \$	30,729 \$	31,036 \$	\$	83,457 \$	228,210 \$	380,346 \$
607 \$	41,013 \$	41,423 \$	41,838 \$	42,256 \$	- \$	\$	77,659 \$	278,704 \$	404,221 \$	
807 \$	347,245 \$	350,718 \$	354,225 \$	357,767 \$	318,666 \$	295,990 \$	\$	467,295 \$	1,932,391 \$	3,609,756 \$
146 \$	1,932,391 \$	2,283,108 \$	2,637,333 \$	2,995,100 \$	3,313,766 \$	3,609,756 \$				

100
.000
.000
.500
.000
.000
.000
000

12

Table A.3. Summary of capital improvements and property maintenance.

Projected Infrastructure and Property Maintenance Expenditures
Red River Army Depot

Scenario: RRAD Recast

CAPITAL EXPENDITURES	Basis	Year	Year	Year	Year	Year	Year	Year	
		1 1998	2 1999	3 2000	4 2001	5 2002	6 2003	7 2004	
Infrastructure									
SOFT COSTS									
Engineering									
Roads, Utilities & Site Engineering and Inspection	\$ 1,980,191	\$ 451,014	\$ 495,688	\$ 369,870	\$ 210,790	\$ 41,096	\$ 158,821	\$ 126,631	
Golf Course Preconstruct & Design & Inspection	\$ 644,366	\$ -	\$ 221,463	\$ 179,617	\$ 174,454	\$ 68,832	\$ -	\$ -	
Architectural Services	\$ 64,609	\$ -	\$ -	\$ 31,827	\$ 32,782	\$ -	\$ -	\$ -	
Construction Mobilization	\$ 906,654	\$ -	\$ 130,300	\$ 272,305	\$ 150,031	\$ 109,275	\$ 26,383	\$ 38,117	
Bond Counsel	\$ 271,995	\$ -	\$ 39,090	\$ 81,691	\$ 45,009	\$ 32,782	\$ 7,915	\$ 11,435	
Subtotal - Soft Costs	\$ 3,867,815	\$ 451,014	\$ 886,541	\$ 935,310	\$ 613,066	\$ 251,985	\$ 193,119	\$ 176,183	
ROAD & UTILITIES									
Site Clearance & Preparation (205 acres) [1]	\$ 948,123	\$ 114,800	\$ 109,796	\$ 260,961	\$ -	\$ -	\$ -	\$ -	
Utility System Code & Life Safety Improvements	\$ 2,173,106	\$ -	\$ 848,720	\$ 874,182	\$ 450,204	\$ -	\$ -	\$ -	
Water Line Extensions	\$ 299,374	\$ -	\$ 54,549	\$ 56,185	\$ 57,871	\$ -	\$ 61,396	\$ 31,619	
Sewer Line Extensions	\$ 284,110	\$ -	\$ 51,768	\$ 53,321	\$ 54,920	\$ -	\$ 58,265	\$ 30,007	
Road Construction	\$ 2,180,925	\$ -	\$ -	\$ 396,777	\$ 408,680	\$ 420,940	\$ -	\$ 334,932	
Road Reconstruction	\$ 906,045	\$ -	\$ -	\$ 164,837	\$ 169,782	\$ 174,876	\$ -	\$ 139,144	
Hwy 82 Road Crossings [2]	\$ 431,102	\$ -	\$ 206,000	\$ -	\$ -	\$ 225,102	\$ -	\$ -	
Natural Gas Line Extensions	\$ 222,076	\$ -	\$ 19,863	\$ 40,930	\$ 42,157	\$ -	\$ 44,725	\$ 46,067	
Entrance Signs off Hwy 82 [3]	\$ 67,663	\$ -	\$ 15,450	\$ -	\$ 16,391	\$ -	\$ -	\$ 35,822	
Street Lighting	\$ 115,227	\$ -	\$ -	\$ 20,963	\$ 21,592	\$ 22,240	\$ -	\$ 17,596	
Misc. Road Reconstruction [4]	\$ 1,241,143	\$ -	\$ 607,700	\$ 375,559	\$ 257,884	\$ -	\$ -	\$ -	
Subtotal - Roads & Utilities	\$ 8,868,894	\$ 114,800	\$ 1,913,852	\$ 2,243,715	\$ 1,479,481	\$ 843,158	\$ 164,386	\$ 635,287	
GOLF COURSE UPGRADE & EXPANSION									
Golf Course Construction & Grow-In (New 9 Holes)	\$ 1,798,221	\$ -	\$ -	\$ 700,194	\$ 540,900	\$ 557,127	\$ -	\$ -	
Clubhouse & Officers Club Renovation [5]	\$ 215,363	\$ -	\$ -	\$ 106,090	\$ 109,273	\$ -	\$ -	\$ -	
Golf Course Infrastructure and Equipment	\$ 113,420	\$ -	\$ -	\$ -	\$ 27,318	\$ 28,138	\$ 57,964	\$ -	
Golf Maintenance & Storage Facilities	\$ 162,752	\$ -	\$ -	\$ 79,568	\$ 40,977	\$ 42,207	\$ -	\$ -	
Renovation to Existing 9-hole Course	\$ 287,708	\$ -	\$ -	\$ -	\$ -	\$ 70,344	\$ 217,364	\$ -	
Subtotal - Golf Course Upgrade & Expansion	\$ 2,577,464	\$ -	\$ -	\$ 885,852	\$ 718,468	\$ 697,816	\$ 275,328	\$ -	
MISCELLANEOUS IMPROVEMENTS									
Tenant Fit-Up Allowance/SF [6]	\$ 3,286,925	\$ 73,844	\$ 281,251	\$ 1,512,631	\$ 101,676	\$ -	\$ -	\$ -	
Building Demolition & Disposal [7]	\$ 909,821	\$ -	\$ -	\$ 24,268	\$ 228,391	\$ 305,753	\$ -	\$ -	
Contingency (10%)	\$ 2,708,951	\$ 30,344	\$ 410,896	\$ 779,607	\$ 472,597	\$ 338,770	\$ 87,943	\$ 127,057	
Subtotal - Miscellaneous Road Improvements	\$ 6,905,697	\$ 104,188	\$ 692,147	\$ 2,316,506	\$ 802,664	\$ 644,523	\$ 87,943	\$ 127,057	
Subtotal - Hard Costs	\$ 18,352,055	\$ 218,988	\$ 2,605,999	\$ 5,446,073	\$ 3,000,613	\$ 2,185,497	\$ 527,657	\$ 762,344	
TOTAL HARD & SOFT COSTS									
Phasing	0%	\$ 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Phased Cost plus Inflation @	3%	\$ 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	94%								
Building Fit-Up									
Total Existing Manufacturing Space Absorbed plus ¹									
Manufacturing Tenant Fit-Up Allowances	\$ -	12%	-	\$ -	\$ 9,000	\$ 9,000	\$ 9,000	\$ 9,000	
		3%	1	\$ -	\$ -	\$ -	\$ -	\$ -	
		94%							
TOTAL CAPITAL EXPENDITURES									
		\$ 670,002	\$ 3,492,540	\$ 6,381,383	\$ 3,613,679	\$ 2,437,482	\$ 720,776	\$ 938,527	

(1)

.D Recast

Table A.4. Summary of debt service.

Annual Debt Service Calculations
Red River Army Depot

Scenario: RRAD Recast

	Year 1 1999	Year 2 2000	Year 3 2001	Year 4 2002	Year 5 2003	Year 6 2004	Year 7 2005	Year 8 2006
1 Capital Budget	\$ 670,002	\$ 3,492,540	\$ 6,381,383	\$ 3,613,679	\$ 2,437,482	\$ 720,776	\$ 938,527	\$ 1,381,230
2 Less Cash Flow Applied To Principal Red	2.5% \$ (670,002)	\$ (1,000,000)	\$ (800,000)	\$ -	\$ -	\$ -	\$ -	\$ -
3 Plus Debt Service Reserve	9.00% \$ -	\$ 224,329	\$ 502,324	\$ 325,231	\$ 219,373	\$ 64,870	\$ 84,467	\$ 124,311
4 Principal Borrowed	0% \$ -	\$ 2,716,869	\$ 6,083,707	\$ 3,938,910	\$ 2,656,855	\$ 785,646	\$ 1,022,994	\$ 1,505,541
5								
6 Interest Rate ³	5.5%							
7 Term	20							
8 Annual Debt Service (Principal + Interest) ⁴	0.083679							
9								
# Year	1	-						
#	2	-	135,843					
#	3	-	135,843	304,185				
#	4	-	135,843	304,185	196,946			
#	5	-	135,843	304,185	196,946	132,843		
#	6	-	135,843	304,185	196,946	132,843	39,282	
#	7	-	135,843	304,185	196,946	132,843	39,282	51,150
#	8	-	135,843	304,185	196,946	132,843	39,282	51,150
#	9	-	135,843	304,185	196,946	132,843	39,282	51,150
#	10	-	135,843	304,185	196,946	132,843	39,282	51,150
#	11	-	135,843	304,185	196,946	132,843	39,282	51,150
#	12	-	135,843	304,185	196,946	132,843	39,282	51,150
#	13	-	135,843	304,185	196,946	132,843	39,282	51,150
#	14	-	135,843	304,185	196,946	132,843	39,282	51,150
#	15	-	135,843	304,185	196,946	132,843	39,282	51,150
#	16	-	135,843	304,185	196,946	132,843	39,282	51,150
#	17	-	135,843	304,185	196,946	132,843	39,282	51,150
#	18	-	135,843	304,185	196,946	132,843	39,282	51,150
#	19	-	135,843	304,185	196,946	132,843	39,282	51,150
#	20	-	135,843	304,185	196,946	132,843	39,282	51,150
#	21	-	135,843	304,185	196,946	132,843	39,282	51,150
#	22	-		304,185	196,946	132,843	39,282	51,150
#	23	-			196,946	132,843	39,282	51,150
#	24	-				132,843	39,282	51,150
#	25	-				-		
#	26	-				-		
#	27	-				-		
#	28	-				-		
#	29	-				-		
#	30	-				-		
#	31	-				-		
#	32	-				-		
#	33	-				-		
#	34	-				-		
#	TOTALS	\$ -	\$ 2,716,869	\$ 6,083,707	\$ 3,938,910	\$ 2,656,855	\$ 746,364	\$ 920,695
#	Principal	\$ -	\$ 2,716,869	\$ 6,083,707	\$ 3,938,910	\$ 2,656,855	\$ 785,646	\$ 1,022,994
#	Interest	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (39,282)	\$ (102,299)
#								\$ (225,853)

(1)

RAD Recast

Totals	Principal Repayment	Principal Payment	Cumulative Borrowing	Beginning Balance	Interest Payment	Debt Service
2,219,870						
4,260,776)						
1,683,819						
3,642,913						
	\$ 135,843	1	\$ 2,716,869	\$ 2,716,869	\$ 149,428	\$ 285,271
	\$ 440,029	2	\$ 8,800,576	\$ 8,664,733	\$ 476,560	\$ 916,589
	\$ 636,974	3	\$ 12,739,486	\$ 12,163,614	\$ 668,999	\$ 1,305,973
	\$ 769,817	4	\$ 15,398,342	\$ 14,183,495	\$ 780,092	\$ 1,549,909
	\$ 809,099	5	\$ 16,181,987	\$ 14,199,324	\$ 780,963	\$ 1,590,062
	\$ 860,249	6	\$ 17,204,982	\$ 14,413,219	\$ 792,727	\$ 1,652,976
	\$ 835,526	7	\$ 18,710,523	\$ 15,058,510	\$ 828,218	\$ 1,763,744
	\$ 1,001,328	8	\$ 20,026,566	\$ 15,439,027	\$ 849,147	\$ 1,850,475
	\$ 1,019,646	9	\$ 20,382,914	\$ 14,804,047	\$ 814,223	\$ 1,833,868
	\$ 1,019,646	10	\$ 20,382,914	\$ 14,804,047	\$ 814,223	\$ 1,833,868
	\$ 1,019,646	11	\$ 20,382,914	\$ 13,784,401	\$ 758,142	\$ 1,777,788
	\$ 1,019,646	12	\$ 20,382,914	\$ 12,764,756	\$ 702,062	\$ 1,721,707
	\$ 1,019,646	13	\$ 20,382,913	\$ 11,745,109	\$ 645,961	\$ 1,665,627
	\$ 1,019,646	14	\$ 20,382,913	\$ 10,725,463	\$ 589,900	\$ 1,609,546
	\$ 1,019,646	15	\$ 19,642,913	\$ 8,955,818	\$ 492,570	\$ 1,512,216
	\$ 1,019,646	16	\$ 19,642,913	\$ 7,936,173	\$ 436,489	\$ 1,456,135
	\$ 1,019,646	17	\$ 19,642,913	\$ 6,916,527	\$ 380,409	\$ 1,400,055
	\$ 1,019,646	18	\$ 19,642,913	\$ 5,896,881	\$ 324,328	\$ 1,343,974
	\$ 1,019,646	19	\$ 19,642,913	\$ 4,877,236	\$ 268,248	\$ 1,287,894
	\$ 1,019,646	20	\$ 19,642,913	\$ 3,857,590	\$ 212,167	\$ 1,231,813
	\$ 1,019,646	21	\$ 19,642,913	\$ 2,837,944	\$ 156,087	\$ 1,175,733
	\$ 883,802	22	\$ 19,642,913	\$ 1,818,299	\$ 100,006	\$ 983,809
	\$ 579,617	23	\$ 19,642,913	\$ 934,497	\$ 51,397	\$ 631,014
	\$ 354,880	24	\$ 19,642,913	\$ 354,880	\$ 19,518	\$ 374,398
	\$ (0)	25	\$ 19,642,913	\$ -	\$ -	\$ (0)
	\$ (0)	26	\$ 19,642,913	\$ -	\$ -	\$ (0)
	\$ (0)	27	\$ 19,642,913	\$ -	\$ -	\$ (0)
	\$ (0)	28	\$ 19,642,913	\$ -	\$ -	\$ (0)
	\$ (0)	29	\$ 19,642,913	\$ -	\$ -	\$ (0)
	\$ (0)	30	\$ 19,642,913	\$ -	\$ -	\$ (0)
	\$ (0)	31	\$ 19,642,913	\$ -	\$ -	\$ (0)
	\$ (0)	32	\$ 19,642,913	\$ -	\$ -	\$ (0)
	\$ (0)	33	\$ 19,642,913	\$ -	\$ -	\$ (0)
	\$ (0)	34	\$ 19,642,913	\$ -	\$ -	\$ (0)
7,936,172	\$ 19,642,913				\$ 11,277,663	\$ 30,920,575
	\$ 19,642,913					
	\$ 19,642,913					
	\$ (1)					

(3)

Table A.5. LRA Business Plan pro forma summary.

15-Year Pro Forma Analysis
Red River Army Depot

Scenario: RRAD Recasta

	Year 0	Year 1 1999	Year 2 2000	Year 3 2001	Year 4 2002	Year 5 2003	Year 6 2004	Year 7 2005	Year 8 2006
1 DEVELOPMENT YEAR									
2 REVENUES FROM REAL ESTATE ACTIVITY									
4 Land Sales									
\$ Sales of Existing Facilities [1]	\$ -	\$ 22,725	\$ 50,495	\$ 187,515	\$ 206,560	\$ 208,625	\$ 281,303	\$ 264,116	\$ 255,789
\$ Rent from Runnels Village & Other Housing [3]	\$ -	\$ 81,600	\$ 347,257	\$ 631,840	\$ 292,551	\$ 234,393	\$ 1,108,550	\$ 155,789	\$ 399,181
\$ Leases on Existing Buildings [4]	\$ 34,760	\$ 64,040	\$ 66,834	\$ 61,439	\$ 385,686	\$ 166,618	\$ 423,529	\$ 10,234	\$ 132,435
\$ Subtotal Sales/Lease Income	\$ 63,530	\$ 66,677	\$ 66,928	\$ 66,017	\$ 63,770	\$ 59,923	\$ 54,101	\$ 156,144	\$ 981,755
Total Revenues	\$ 163,788	\$ 386,160	\$ 1,740,534	\$ 2,270,534	\$ 2,275,695	\$ 2,006,864	\$ 2,023,627	\$ 2,197,731	\$ 1,305,094
3 OTHER INCOME									
\$ Common Area Maintenance Fees	\$ 2,780	\$ 13,609	\$ 70,787	\$ 80,101	\$ 82,477	\$ 85,540	\$ 36,955	\$ 34,580	\$ -
\$ On Site Timber Sales [5]	\$ 184,500	\$ 123,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ Share Of Utility Rate Revenue for Capital Improvements	\$ -	\$ -	\$ 131,841	\$ 139,002	\$ 145,810	\$ 153,559	\$ 137,149	\$ 288,749	\$ -
\$ State Contributions [6]	\$ 1,300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ County/RRLRA Matching Funds [7]	\$ 325,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ Grants - OEA	\$ 100,000	\$ 100,000	\$ 60,000	\$ 60,000	\$ 40,000	\$ 40,000	\$ -	\$ -	\$ -
\$ Grants - EDA	\$ -	\$ 1,950,000	\$ 1,950,000	\$ 1,300,000	\$ 1,300,000	\$ -	\$ -	\$ -	\$ -
\$ Subtotal - Other Income	\$ 1,912,289	\$ 2,186,609	\$ 2,212,628	\$ 1,579,103	\$ 1,568,287	\$ 279,099	\$ 174,104	\$ 323,339	\$ -
Total Revenues	\$ 2,076,057	\$ 2,572,789	\$ 3,953,162	\$ 3,849,637	\$ 3,843,982	\$ 2,285,963	\$ 2,197,731	\$ 1,305,094	\$ -
4 EXPENDITURES									
BUILDINGS, GROUNDS & MUNICIPAL SVCS									
\$ Private Security	\$ 150,000	\$ 150,000	\$ 153,750	\$ 157,594	\$ 161,534	\$ 165,572	\$ 169,711	\$ 173,954	\$ 178,303
\$ Grounds Maintenance [8]	\$ 50,000	\$ 25,000	\$ 37,500	\$ 50,000	\$ 53,750	\$ 55,000	\$ 45,000	\$ 34,500	\$ 23,500
\$ Building Maintenance - Unleased Buildings [9]	\$ 0.90	\$ 15,154	\$ 279,643	\$ 99,775	\$ 54,012	\$ 47,922	\$ 34,927	\$ 383,751	\$ 386,534
\$ Building Maintenance - Unsold Buildings [9]	\$ 0.90	\$ 213,340	\$ 214,983	\$ 206,952	\$ 175,684	\$ 150,619	\$ 125,105	\$ 48,362	\$ 49,413
\$ Fire & EMS Service	\$ 25,000	\$ 25,625	\$ 26,265	\$ 26,922	\$ 27,595	\$ 28,265	\$ 28,992	\$ 29,717	\$ 30,460
County Police Service [10]	\$ 154,100	\$ 15,410	\$ 15,795	\$ 16,181	\$ 16,566	\$ 16,951	\$ 17,336	\$ 17,722	\$ 18,107
Real Property Insurance	\$ 0.03	\$ 2,513	\$ 19,041	\$ 16,223	\$ 11,871	\$ 10,027	\$ 7,903	\$ 20,875	\$ 19,444
Other Maintenance/Contingency	10.00%	\$ 40,349	\$ 68,588	\$ 51,432	\$ 44,496	\$ 41,911	\$ 37,474	\$ 64,057	\$ 63,775
\$ Subtotal - Buildings & Grounds	\$ 487,391	\$ 815,566	\$ 625,085	\$ 545,508	\$ 516,287	\$ 466,448	\$ 772,938	\$ 769,836	\$ -
5 ADMINISTRATION & MARKETING									
\$ Salaries	\$ 141,450	\$ 160,259	\$ 164,265	\$ 168,372	\$ 172,581	\$ 176,896	\$ 181,318	\$ 185,851	\$ -
\$ Fringe Benefits	\$ 46,679	\$ 52,865	\$ 54,208	\$ 55,563	\$ 56,952	\$ 58,376	\$ 59,835	\$ 61,331	\$ -
Contracted Services [11]	\$ 85,455	\$ 87,591	\$ 89,734	\$ 75,759	\$ 61,040	\$ 45,579	\$ 46,625	\$ 30,623	\$ -
Overhead (Equip., Supl., Travel, etc.)	\$ 67,538	\$ 69,181	\$ 70,865	\$ 72,590	\$ 72,529	\$ 74,295	\$ 52,330	\$ 35,313	\$ -
Marketing Consultant	\$ 63,500	\$ 30,050	\$ 28,626	\$ 24,204	\$ 24,785	\$ 43,929	\$ 25,951	\$ 3,537	\$ -
Advertising and PR	\$ 132,000	\$ 106,000	\$ 90,975	\$ 50,950	\$ 44,050	\$ 116,200	\$ 103,875	\$ 40,850	\$ -
Broker's Commissions and Fees [12]	7.50%	\$ 4,779	\$ 16,795	\$ 101,608	\$ 66,891	\$ 38,027	\$ 33,871	\$ 104,954	\$ 34,518
Operating Reserve and Contingency	10.00%	\$ 54,140	\$ 52,276	\$ 60,028	\$ 51,433	\$ 46,996	\$ 54,914	\$ 57,489	\$ 39,202
\$ Subtotal - Administration & Marketing	\$ 595,541	\$ 575,037	\$ 660,309	\$ 565,762	\$ 516,960	\$ 604,060	\$ 632,377	\$ 431,225	\$ -
Total Operating and Maintenance Costs:	\$ 1,082,932	\$ 1,390,602	\$ 1,285,394	\$ 1,111,270	\$ 1,033,247	\$ 1,070,508	\$ 1,405,315	\$ 1,200,761	\$ -
\$ Cash Flow Available for Debt Service	\$ 993,125	\$ 1,182,187	\$ 2,667,788	\$ 2,738,368	\$ 2,810,735	\$ 1,216,455	\$ 792,416	\$ 104,333	\$ -
6 INFRASTRUCTURE COSTS									
\$ Infrastructure Improvements ¹	\$ 670,002.00	\$ 3,492,540.00	\$ 6,361,383.00	\$ 3,613,579.00	\$ 2,437,482.00	\$ 720,776.00	\$ 938,527.00	\$ 1,361,230.00	\$ -
\$ Total Infrastructure Costs	\$ 323,123	\$ (2,310,353)	\$ (3,713,615)	\$ (875,311)	\$ 373,253	\$ 494,679	\$ (146,111)	\$ (1,276,897)	\$ -
7 DEBT SERVICE									
\$ Principal Payments	\$ -	\$ 135,843	\$ 440,029	\$ 636,974	\$ 769,817	\$ 809,099	\$ 860,249	\$ 935,526	\$ -
Interest Expenses	\$ -	\$ 149,423	\$ 476,560	\$ 668,999	\$ 780,092	\$ 780,963	\$ 792,727	\$ 828,218	\$ -
Subtotal - Debt Service	\$ -	\$ 285,271	\$ 916,585	\$ 1,305,973	\$ 1,549,909	\$ 1,590,062	\$ 1,652,976	\$ 1,763,744	\$ -
Total Operating Expenses and Debt Service	\$ 1,082,932	\$ 1,675,873	\$ 2,201,963	\$ 2,417,243	\$ 2,583,156	\$ 2,650,570	\$ 3,058,291	\$ 2,964,505	\$ -
\$ Net Operating Income	\$ 993,125	\$ 896,916	\$ 1,751,179	\$ 1,432,396	\$ 1,260,826	\$ (374,608)	\$ (860,560)	\$ (1,659,411)	\$ -
Cumulative Cash Flow	\$ 993,125	\$ 1,890,041	\$ 3,641,220	\$ 5,073,614	\$ 6,334,440	\$ 5,989,833	\$ 5,099,273	\$ 3,439,862	\$ -
Less Cash Flow Applied To Capital Improvements	\$ (670,002)	\$ (1,000,000)	\$ (800,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
\$ Net Cumulative Cash Flow	\$ 323,123	\$ 220,039	\$ 1,171,218	\$ 2,603,612	\$ 3,864,438	\$ 3,489,831	\$ 2,829,271	\$ 969,860	\$ -
Remaining Debt Service Obligations: (Years 16-Out)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cash Flow From Operations - Current Year	\$ 993,125	\$ 896,916	\$ 1,751,179	\$ 1,432,396	\$ 1,260,826	\$ (374,608)	\$ (860,560)	\$ (1,659,411)	\$ -
DISCOUNTED CASH FLOWS @ 18%	\$ 841,631	\$ 644,151	\$ 1,065,822	\$ 738,813	\$ 851,119	\$ (138,766)	\$ (270,151)	\$ (441,467)	\$ -
NET PRESENT VALUE OF CASH FLOWS	\$ 3,117,814	\$ 23,997	\$ 369,235	\$ 3,141,811	\$ 3,487,049	\$ -	\$ -	\$ -	\$ -
YEAR-15 RESIDUAL AT 18% CAP RATE ²	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
INDICATED BUSINESS PLAN VALUE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
DISCOUNTED CASH FLOWS @ 13%	\$ 878,871	\$ 702,417	\$ 1,213,656	\$ 878,514	\$ 684,326	\$ (179,931)	\$ (365,790)	\$ (624,204)	\$ -
NET PRESENT VALUE OF CASH FLOWS	\$ 3,450,682	\$ 113,004	\$ 1,466,827	\$ 3,563,666	\$ 4,917,478.74	\$ -	\$ -	\$ -	\$ -
YEAR-15 RESIDUAL AT 18% CAP RATE ²	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
INDICATED BUSINESS PLAN VALUE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

[1] - Assumes tenancy in buildings #333 and #312 by year 3.

[2] - Golf course to be expanded to 18 holes by year 6.

[3] - Runnels Village to be rented to year 7 and then demolished, assuming demand for bus/light industrial in Parcel 1-C.

[4] - Includes 100% occupancy of buildings #333 and #312 by year 3 and Phase 2 and 3 buildings conveyed in Years 2 and 3.

[5] - Assumes that 205 acres of timber will be harvested as part of site preparation for Parcels 1-A, 1-B, 1-C and 1-D.

[6] - State of Texas to contribute 80% of local matching funds requirements.

[7] - RRLRA to contribute 20% of matching funds from local sources.

[8] - Does not include grounds maintenance for lease-back properties maintained by Arm.

[9] - Building maintenance expense expected to increase in Year 2 and 3 when Phase 2 &

[10] - Assumes 10 percent county sheriff's department coverage. (Approximately \$154,000).

[11] - Contracted services include janitorial and maintenance services.

[12] - Assumes average of 7.5% commissions due to RRLRA coverage of marketing an.

[13] - Assumes total capital improvements, less outside funding, will be financed through F.

[14] - Assumes that excess cash flow in given years (as available) will be used to reduce t.



Forecast

Year 7 2005	Year 8 2006	Year 9 2007	Year 10 2008	Year 11 2009	Year 12 2010	Year 13 2011	Year 14 2012	Year 15 2013	Cumulative Forecast		
									5 Year Total	10 Year Total	15 year Total
303 \$ 284,116 \$ 343,807 \$ 347,245 \$ 350,718 \$ 354,225 \$ 357,767 \$ 318,666 \$ 295,990									467,295	1,932,391	3,609,756
550 \$ 155,789 \$ 158,905 \$ - \$ - \$ - \$ - \$ - \$ -									1,383,246	3,010,886	3,010,886
529 \$ 399,181 \$ 467,406 \$ 485,346 \$ 516,745 \$ 501,874 \$ 566,385 \$ 566,782 \$ 607,689									612,761	2,654,841	5,334,286
101 \$ 10,234 \$ 10,414 \$ 10,593 \$ 10,773 \$ 10,952 \$ 11,132 \$ 11,311 \$ 11,491									328,762	474,027	529,686
144 \$ 132,435 \$ 866,129 \$ 1,159,397 \$ 1,182,585 \$ 1,206,237 \$ 1,230,362 \$ 1,254,969 \$ 1,280,068									4,074,865	7,756,075	13,910,296
627 \$ 981,755 \$ 1,876,662 \$ 2,002,581 \$ 2,050,821 \$ 2,073,286 \$ 2,165,646 \$ 2,171,728 \$ 2,195,218									6,836,731	15,728,220	26,384,920
955 \$ 34,590 \$ 75,617 \$ 86,062 \$ 86,062 \$ 86,062 \$ 86,062 \$ 86,062 \$ 86,062									249,743	868,507	998,817
- \$ - \$ - \$ - \$ - \$ - \$ - \$ -									307,500	307,500	307,500
149 \$ 268,749 \$ 342,068 \$ 368,255 \$ 384,639 \$ 401,320 \$ 418,300 \$ 435,578 \$ 450,601									416,653	1,706,433	3,796,871
- \$ - \$ - \$ - \$ - \$ - \$ - \$ -									1,300,000	1,300,000	1,300,000
- \$ - \$ - \$ - \$ - \$ - \$ - \$ -									325,000	325,000	325,000
- \$ - \$ - \$ - \$ - \$ - \$ - \$ -									360,000	400,000	400,000
- \$ - \$ - \$ - \$ - \$ - \$ - \$ -									6,500,000	6,500,000	6,500,000
104 \$ 323,339 \$ 417,685 \$ 454,317 \$ 470,701 \$ 487,392 \$ 504,362 \$ 521,640 \$ 536,653									9,458,896	11,107,440	13,626,186
731 \$ 1,305,094 \$ 2,294,347 \$ 2,456,898 \$ 2,531,522 \$ 2,560,670 \$ 2,670,008 \$ 2,693,368 \$ 2,731,881									16,295,627	26,835,660	40,023,108
954 \$ 178,303 \$ 182,780 \$ 187,929 \$ 196,006 \$ 199,203 \$ 204,433 \$ 211,694 \$ 222,996									788,449	1,680,507	1,980,829
500 \$ 23,500 \$ 24,000 \$ 24,500 \$ 25,000 \$ 25,500 \$ 26,000 \$ 26,500 \$ 27,000									221,280	372,780	502,750
751 \$ 386,534 \$ 101,863 \$ 27,212 \$ 27,768 \$ 28,323 \$ 28,878 \$ 29,434 \$ 29,989									496,506	1,450,793	1,575,185
362 \$ 49,413 \$ 25,232 \$ 25,758 \$ 26,283 \$ 26,809 \$ 27,335 \$ 27,860 \$ 28,396									961,578	1,235,448	1,372,121
717 \$ 30,460 \$ 31,222 \$ 32,002 \$ 32,802 \$ 33,622 \$ 34,463 \$ 35,324 \$ 36,207									134,682	267,085	469,503
722 \$ 18,107 \$ 18,492 \$ 18,877 \$ 19,263 \$ 19,648 \$ 20,033 \$ 20,418 \$ 20,804									80,903	171,437	271,603
375 \$ 19,444 \$ 4,716 \$ 1,234 \$ 1,234 \$ 1,234 \$ 1,234 \$ 1,234 \$ 1,234									59,681	113,853	120,023
057 \$ 63,775 \$ 33,386 \$ 26,480 \$ 17,506 \$ 12,984 \$ 13,265 \$ 13,549 \$ 13,836									246,776	471,948	543,088
938 \$ 769,536 \$ 421,671 \$ 343,392 \$ 248,862 \$ 197,323 \$ 201,641 \$ 206,013 \$ 210,442									2,989,835	5,763,821	6,825,102
318 \$ 185,851 \$ 190,497 \$ 195,260 \$ 127,416 \$ 130,602 \$ 133,867 \$ 137,214 \$ 140,644									806,927	1,736,749	2,406,492
335 \$ 61,331 \$ 62,664 \$ 64,436 \$ 42,047 \$ 43,099 \$ 44,176 \$ 45,280 \$ 46,412									266,287	573,129	794,143
525 \$ 30,623 \$ 26,807 \$ 27,402 \$ 23,315 \$ 23,826 \$ 24,346 \$ 24,870 \$ 25,401									399,579	576,615	696,375
330 \$ 35,313 \$ 36,146 \$ 29,267 \$ 29,947 \$ 30,643 \$ 31,356 \$ 28,022 \$ 28,668									352,703	680,064	728,690
351 \$ 3,537 \$ 3,625 \$ 3,716 \$ 3,809 \$ 3,909 \$ 3,124 \$ 3,202 \$ 3,282									171,165	251,923	268,704
375 \$ 40,850 \$ 28,200 \$ 22,800 \$ 17,150 \$ 6,250 \$ 3,188 \$ 3,250 \$ 3,313									423,975	735,900	769,051
354 \$ 34,518 \$ 93,251 \$ 42,057 \$ 26,460 \$ 26,725 \$ 26,992 \$ 24,061 \$ 22,312									228,100	636,761	643,311
389 \$ 39,202 \$ 44,139 \$ 38,495 \$ 27,014 \$ 26,427 \$ 26,713 \$ 26,598 \$ 27,011									264,873	499,112	632,875
377 \$ 431,225 \$ 485,529 \$ 423,443 \$ 297,156 \$ 290,698 \$ 293,840 \$ 292,577 \$ 297,125									2,913,600	5,490,243	6,961,641
318 \$ 1,200,761 \$ 807,200 \$ 766,835 \$ 543,020 \$ 488,021 \$ 498,481 \$ 498,560 \$ 507,567									8,903,444	11,254,064	13,786,743
316 \$ 104,333 \$ 1,367,146 \$ 1,060,063 \$ 1,988,602 \$ 2,072,640 \$ 2,174,527 \$ 2,194,778 \$ 2,224,314									10,392,183	16,581,586	26,236,366
00 \$ 1,361,230 \$ 1,207,379 \$ 536,099 \$ - \$ 18,396 \$ 470,869 \$ 551,508 \$ -									16,505,086	21,179,097	22,219,870
(11) (1,276,897) 179,767 1,353,964 1,988,502 2,064,253 1,703,658 1,643,270 2,224,314									16,505,086	21,179,097	22,219,870
49 \$ 935,526 \$ 1,001,328 \$ 1,019,646 \$ 1,019,646 \$ 1,019,646 \$ 1,019,646 \$ 1,019,646 \$ 1,019,646									1,982,664	6,606,512	11,706,740
27 \$ 828,216 \$ 849,147 \$ 814,223 \$ 758,142 \$ 702,062 \$ 645,981 \$ 589,900 \$ 492,570									2,075,079	6,140,356	9,329,011
76 \$ 1,763,744 \$ 1,850,475 \$ 1,833,866 \$ 1,777,786 \$ 1,721,707 \$ 1,665,627 \$ 1,609,546 \$ 1,512,216									4,057,743	12,748,868	21,035,762
91 \$ 2,964,505 \$ 2,757,675 \$ 2,600,704 \$ 2,320,808 \$ 2,209,728 \$ 2,161,108 \$ 2,108,136 \$ 2,019,783									9,961,187	24,002,933	34,822,495
160 \$ (1,659,411) (463,329) (143,805) 210,714 350,941 508,900 585,232 712,098									6,334,440	2,832,726	5,200,613
273 \$ 3,436,862 \$ 2,976,833 \$ 2,832,726 \$ 3,043,442 \$ 3,394,383 \$ 3,903,283 \$ 4,488,515 \$ 5,200,613									6,334,440	2,832,726	5,200,613
371 \$ 969,860 \$ 806,531 \$ 362,726 \$ 573,440 \$ 905,985 \$ 944,015 \$ 977,739 \$ 939,857									\$ (2,470,002)	\$ (2,470,002)	\$ (4,260,776)
160 \$ (1,659,411) (463,329) (143,805) 210,714 350,941 508,900 585,232 712,098									\$ (2,470,002)	\$ (2,470,002)	\$ (4,260,776)
51) \$ (441,467) \$ (104,460) \$ (27,476) \$ 34,119 \$ 48,156 \$ 59,179 \$ 57,674 \$ 60,472									4,421,126	5-Yr DCF Ave	\$ 51,720
									\$ 369,235		23,996,85
790 \$ (624,204) \$ (164,235) \$ (42,363) \$ 64,833 \$ 80,964 \$ 103,899 \$ 105,738 \$ 113,868									\$ 9,173,933	5-Yr DCF Ave	\$ 91,878
									\$ 1,466,827		113,003,85

xiles maintained by Army.

2 and 3 when Phase 2 and 3 property conveyed to RRLRA.

(Approximately \$154,000/yr. For 24 hr. police protection).

vices.

verage of marketing and advertising costs.

will be financed through RRLRA revenue bonds.

) will be used to reduce the amount of bonding required.

(2)

Cumulative Forecast	
10 Year	15 year
Total	Total

1,932,391	3,609,756
3,010,886	3,010,886
2,884,841	5,334,296
474,027	529,686
7,756,075	13,010,296
15,728,220	26,364,920

569,507	998,817
307,500	307,500
1,706,433	3,796,871
1,300,000	1,300,000
325,000	325,000
400,000	400,000
6,500,000	6,800,000
11,107,440	13,628,186
26,835,680	40,023,106

1,680,507	1,980,829
372,780	502,780
1,430,783	1,575,185
1,233,448	1,372,121
287,085	489,503
171,437	271,603
113,883	120,023
471,948	643,088
5,763,821	6,825,102

1,736,740	2,406,492
573,129	794,143
676,615	698,375
580,054	728,680
251,823	268,704
735,900	769,051
536,761	663,311
499,112	632,875
5,490,243	6,951,641
11,254,064	13,786,743
16,581,596	26,236,365

\$ 21,179,097	\$ 22,219,870
21,179,097	22,219,870

\$ 6,608,512	\$ 11,706,740
\$ 6,140,356	\$ 9,329,011
\$ 12,748,968	\$ 21,035,782
\$ 24,002,933	\$ 34,822,495
\$ 2,832,728	\$ 5,200,613
\$ 2,832,728	\$ 5,200,613
\$ (2,470,002)	\$ (4,260,776)
\$ -	\$ -

#DIV/0!	
5-Yr DCF Ave	\$ 51,720
	23,996.85

5-Yr DCF Ave	\$ 91,878
	113,003.85

(R)

Wetlands Mitigation Requirements

Year 8 2006	Year 9 2007	Year 10 2008	Year 11 2009	Year 12 2010	Year 13 2011	Year 14 2012	Year 15 2013	Cumulative Forecast		
								8 Year Total	10 Year Total	15 year Total
24,116 \$ 343,807 \$ 347,245 \$ 350,718 \$ 354,225 \$ 357,767 \$ 318,666 \$ 295,990								467,295	1,322,391	3,600,756
55,789 \$ 158,905 \$ - \$ - \$ - \$ - \$ - \$ -								6,843,511	9,873,714	9,873,714
- \$ - \$ - \$ - \$ - \$ - \$ - \$ -								2,800,000	2,800,000	2,500,000
199,181 \$ 467,406 \$ 485,346 \$ 516,745 \$ 501,874 \$ 566,385 \$ 586,782 \$ 607,669								612,761	2,354,841	8,234,296
10,234 \$ 10,414 \$ 10,593 \$ 10,773 \$ 10,952 \$ 11,132 \$ 11,311 \$ 11,491								328,782	476,827	829,686
32,435 \$ 111,668 \$ 115,246 \$ 117,550 \$ 119,901 \$ 122,299 \$ 124,745 \$ 127,240								1,198,581	2,865,759	2,677,496
81,755 \$ 1,092,200 \$ 958,430 \$ 995,786 \$ 986,952 \$ 1,057,583 \$ 1,041,905 \$ 1,042,390								11,960,910	19,460,732	24,034,948
34,590 \$ 75,617 \$ 86,062 \$ 86,062 \$ 86,062 \$ 86,062 \$ 86,062 \$ 86,062								248,743	868,807	986,817
- \$ - \$ - \$ - \$ - \$ - \$ - \$ -								307,500	307,500	307,500
- \$ - \$ - \$ - \$ - \$ - \$ - \$ -								910,000	910,000	910,000
- \$ - \$ - \$ - \$ - \$ - \$ - \$ -								227,500	227,500	227,500
- \$ - \$ - \$ - \$ - \$ - \$ - \$ -								360,000	480,000	400,000
- \$ - \$ - \$ - \$ - \$ - \$ - \$ -								4,880,000	4,880,000	4,880,000
34,590 \$ 75,617 \$ 86,062 \$ 86,062 \$ 86,062 \$ 86,062 \$ 86,062 \$ 86,062								6,804,743	6,863,867	7,383,817
16,345 \$ 1,167,817 \$ 1,044,492 \$ 1,081,848 \$ 1,073,014 \$ 1,143,645 \$ 1,127,567 \$ 1,128,452								18,864,683	26,364,239	31,918,765
78,303 \$ 182,760 \$ 187,329 \$ 96,006 \$ 49,203 \$ 50,433 \$ 51,694 \$ 52,986								786,449	1,888,807	1,980,829
23,500 \$ 24,000 \$ 24,500 \$ 25,000 \$ 25,500 \$ 26,000 \$ 26,500 \$ 27,000								221,250	372,780	802,750
86,534 \$ 101,863 \$ 27,212 \$ 27,768 \$ 28,323 \$ 28,878 \$ 29,434 \$ 29,989								496,806	1,438,783	1,575,185
49,413 \$ 25,232 \$ 25,758 \$ 26,283 \$ 26,809 \$ 27,335 \$ 27,860 \$ 28,396								961,578	1,236,048	1,372,121
30,480 \$ 31,222 \$ 32,002 \$ 32,802 \$ 33,622 \$ 34,463 \$ 35,324 \$ 36,207								134,692	267,885	458,503
18,107 \$ 18,492 \$ 18,877 \$ 19,263 \$ 19,648 \$ 20,033 \$ 20,418 \$ 20,804								80,903	171,437	271,603
19,444 \$ 4,716 \$ 1,234 \$ 1,234 \$ 1,234 \$ 1,234 \$ 1,234 \$ 1,234								88,681	133,853	120,023
63,775 \$ 33,986 \$ 26,480 \$ 17,506 \$ 12,984 \$ 13,265 \$ 13,549 \$ 13,836								246,776	471,945	843,088
68,836 \$ 421,671 \$ 343,392 \$ 246,862 \$ 197,323 \$ 201,541 \$ 206,013 \$ 210,442								2,980,833	8,763,821	6,825,102
85,851 \$ 190,497 \$ 195,260 \$ 127,416 \$ 130,602 \$ 133,867 \$ 137,214 \$ 140,644								806,927	1,736,749	2,406,492
61,331 \$ 62,854 \$ 64,436 \$ 42,047 \$ 43,099 \$ 44,176 \$ 45,280 \$ 46,412								286,287	573,129	794,143
30,623 \$ 26,807 \$ 27,402 \$ 23,315 \$ 23,826 \$ 24,346 \$ 24,870 \$ 25,401								399,579	676,615	698,375
35,313 \$ 36,146 \$ 29,267 \$ 29,947 \$ 30,643 \$ 31,356 \$ 28,022 \$ 28,668								332,703	888,854	728,690
3,537 \$ 3,625 \$ 3,716 \$ 3,809 \$ 3,124 \$ 3,922 \$ 3,282 \$ 3,364								171,165	251,923	268,704
40,850 \$ 26,200 \$ 22,800 \$ 17,150 \$ 6,250 \$ 3,188 \$ 3,250 \$ 3,313								422,975	736,900	769,051
34,518 \$ 93,251 \$ 42,067 \$ 26,460 \$ 26,725 \$ 26,992 \$ 24,061 \$ 22,312								228,100	536,761	663,311
39,202 \$ 44,139 \$ 38,495 \$ 27,014 \$ 26,427 \$ 26,713 \$ 26,598 \$ 27,011								264,873	498,112	532,875
31,225 \$ 485,529 \$ 423,443 \$ 297,158 \$ 290,698 \$ 293,840 \$ 292,577 \$ 297,125								2,913,809	8,488,843	6,961,641
60,761 \$ 907,200 \$ 786,836 \$ 843,020 \$ 488,021 \$ 495,481 \$ 498,890 \$ 507,567								8,901,444	11,264,864	13,786,743
84,416 \$ 280,616 \$ 277,686 \$ 538,828 \$ 584,993 \$ 648,164 \$ 628,977 \$ 620,865								12,682,209	18,198,775	18,132,022
41,092 \$ 1,582,489 \$ 442,880 \$ - \$ 9,655 \$ 376,823 \$ 652,637 \$ -								\$ 12,494,489	\$ 17,734,833	\$ 18,673,948
51,212 \$ 448,002 \$ 472,139 \$ 472,139 \$ 472,665 \$ 493,202 \$ 523,320 \$ 523,320								\$ 664,632	\$ 2,346,749	\$ 4,828,845
38,877 \$ 414,479 \$ 416,389 \$ 390,421 \$ 365,033 \$ 361,527 \$ 367,631 \$ 338,848								\$ 684,886	\$ 2,336,060	\$ 4,061,621
60,089 \$ 862,480 \$ 886,828 \$ 862,560 \$ 837,697 \$ 854,828 \$ 890,951 \$ 862,169								\$ 1,141,420	\$ 4,882,260	\$ 8,890,466
00,850 \$ 1,769,681 \$ 1,655,365 \$ 1,405,580 \$ 1,325,718 \$ 1,350,309 \$ 1,389,541 \$ 1,369,736								\$ 7,044,864	\$ 18,836,324	\$ 22,677,209
44,505 \$ (801,864) \$ (610,871) \$ (323,732) \$ (252,704) \$ (206,664) \$ (261,975) \$ (241,284)								\$ 11,510,789	\$ 18,827,915	\$ 9,241,856
40,650 \$ 11,138,786 \$ 10,527,915 \$ 10,204,183 \$ 9,951,479 \$ 9,744,815 \$ 9,482,840 \$ 9,241,856								\$ 11,510,789	\$ 18,827,915	\$ 9,241,856
58,809 \$ 2,067,045 \$ 1,456,174 \$ 1,132,442 \$ 879,738 \$ 673,074 \$ 411,099 \$ 169,815								\$ (8,571,403)	\$ (8,671,361)	\$ (8,071,741)
								\$ 4,899,396		
								\$ 5,637,561		
								\$ (738,165)		
34,805 \$ (801,864) \$ (610,871) \$ (323,732) \$ (252,704) \$ (206,664) \$ (261,975) \$ (241,284)									\$ 5,637,561	
63,796 \$ (168,262) \$ (134,475) \$ (63,263) \$ (42,571) \$ (30,013) \$ (32,798) \$ (26,041)								\$ 3,880,530	S-Yr DCF Ave	\$ (38,937)
								\$ 418,814		
57,237 \$ (217,036) \$ (196,684) \$ (93,065) \$ (64,863) \$ (47,362) \$ (53,805) \$ (44,062)								\$ 5,174,039	S-Yr DCF Ave	\$ (60,595)
								\$ 945,278		

is maintained by Army.
 2 and 3 when Phase 2 and 3 property conveyed to PRLRA
 Approximately \$154,000/yr. For 24 hr. police protection.
 20%
 Share of marketing and advertising costs.
 Be financed through PRLRA revenue bonds.
 Will be used to reduce the amount of bonding required.

(2)

(3)

Table A.7. CERL2 Business Plan pro forma summary (partial wetlands mitigation).

15-Year Pro Forma Analysis
Red River Army Depot

Scenario: CERL2 - Partial Wetlands Mitigation Requirement

	Year 0	Year 1 1999	Year 2 2000	Year 3 2001	Year 4 2002	Year 5 2003	Year 6 2004	Year 7 2005	Year 8 2006	Year 9 2007	Year 10 2008
1 DEVELOPMENT YEAR											
2											
3 REVENUES FROM REAL ESTATE ACTIVITY											
4 Land Sales	\$ -	\$ 22,725	\$ 50,495	\$ 138,575	\$ 157,131	\$ 158,703	\$ 230,881	\$ 233,189	\$ 343,807	\$ 347,245	\$ -
5 Sales of Existing Facilities [1]	\$ -	\$ 1,454,166	\$ 1,719,823	\$ 2,004,406	\$ 1,665,117	\$ 1,806,959	\$ 1,108,550	\$ 155,789	\$ 158,905	\$ -	\$ -
6 Sale of Personal Property from Bldgs #333 & 312	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7 Golf Course Operations (Before Debt Service) [2]	\$ 34,760	\$ 64,040	\$ 66,834	\$ 61,439	\$ 385,688	\$ 166,928	\$ 423,529	\$ 399,181	\$ 457,406	\$ 485,346	\$ -
8 Rent from Runnels Village & Other Housing [3]	\$ 65,370	\$ 66,677	\$ 66,928	\$ 66,017	\$ 63,770	\$ 59,923	\$ 54,101	\$ 10,234	\$ 10,414	\$ 10,593	\$ -
9 Leases on Existing Buildings [4]	\$ 63,658	\$ 86,518	\$ 311,195	\$ 376,377	\$ 360,833	\$ 351,685	\$ 156,144	\$ 132,435	\$ 111,668	\$ 115,246	\$ 1
10 Subtotal Sales/Lease Income	\$ 663,788	\$ 2,194,126	\$ 2,715,275	\$ 3,146,814	\$ 3,132,539	\$ 2,343,687	\$ 1,973,205	\$ 930,829	\$ 1,092,200	\$ 958,430	\$ -
11											
12 OTHER INCOME											
13 Common Area Maintenance Fees	\$ 2,769	\$ 13,609	\$ 70,787	\$ 80,101	\$ 82,477	\$ 85,540	\$ 36,955	\$ 34,590	\$ 75,617	\$ 86,062	\$ -
14 On Site Timber Sales [5]	\$ 184,500	\$ 125,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15 Share Of Utility Rate Revenue for Capital Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16 State Contributions [6]	70% [8]	\$ 910,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17 County/RRLRA Matching Funds [7]	\$ 227,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
18 Grants - OEA	\$ 100,000	\$ 100,000	\$ 60,000	\$ 60,000	\$ 40,000	\$ 40,000	\$ -	\$ -	\$ -	\$ -	\$ -
19 Grants - EDA	\$ -	\$ 1,365,000	\$ 1,365,000	\$ 910,000	\$ 910,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
20 Subtotal - Other Income	\$ 1,424,769	\$ 1,601,609	\$ 1,495,787	\$ 1,050,101	\$ 1,032,477	\$ 125,540	\$ 36,955	\$ 34,590	\$ 75,617	\$ 86,062	\$ -
21											
22 Total Revenues	\$ 2,068,857	\$ 3,795,735	\$ 4,211,062	\$ 4,196,915	\$ 4,165,016	\$ 2,469,427	\$ 2,010,160	\$ 965,419	\$ 1,167,817	\$ 1,044,492	\$ 1,
23											
24 EXPENDITURES											
25 BUILDINGS, GROUNDS & MUNICIPAL SVCS											
26 Private Security	\$ 150,000	\$ 150,000	\$ 153,750	\$ 157,594	\$ 161,834	\$ 165,572	\$ 189,711	\$ 173,954	\$ 178,303	\$ 182,760	\$ 187,329
27 Grounds Maintenance [9]	\$ 50,000	\$ 25,000	\$ 37,500	\$ 50,000	\$ 53,750	\$ 55,000	\$ 45,000	\$ 34,500	\$ 23,500	\$ 24,000	\$ 24,500
28 Building Maintenance - Unleased Buildings [10]	\$ 0.90	\$ 15,154	\$ 279,643	\$ 99,775	\$ 54,012	\$ 47,922	\$ 34,927	\$ 385,751	\$ 386,534	\$ 101,863	\$ 27,212
29 Building Maintenance - Unsold Buildings [10]	\$ 0.90	\$ 213,940	\$ 214,983	\$ 206,952	\$ 175,684	\$ 150,619	\$ 125,105	\$ 48,362	\$ 49,413	\$ 25,222	\$ 25,758
30 Fire & EMT Services	\$ 25,000	\$ 25,625	\$ 26,265	\$ 26,922	\$ 27,595	\$ 28,285	\$ 28,992	\$ 29,717	\$ 30,460	\$ 31,222	\$ 32,002
31 County Police Service [11]	\$ 154,100	\$ 15,410	\$ 15,795	\$ 16,181	\$ 16,566	\$ 16,955	\$ 17,336	\$ 17,722	\$ 18,107	\$ 18,492	\$ 18,877
32 Real Property Insurance	\$ 0.03	\$ 2,513	\$ 19,041	\$ 16,229	\$ 11,871	\$ 10,027	\$ 7,903	\$ 20,875	\$ 19,444	\$ 4,716	\$ 1,234
33 Other Maintenance/Contingency	10.00%	\$ 40,349	\$ 68,588	\$ 51,432	\$ 44,496	\$ 41,911	\$ 37,474	\$ 64,057	\$ 63,775	\$ 33,386	\$ 26,480
34 Subtotal - Buildings & Grounds	\$ 487,391	\$ 818,943	\$ 825,085	\$ 845,606	\$ 816,287	\$ 466,448	\$ 772,934	\$ 769,836	\$ 421,671	\$ 343,392	\$ -
35											
36 ADMINISTRATION & MARKETING											
37 Salaries	\$ 141,450	\$ 160,259	\$ 164,265	\$ 168,372	\$ 172,581	\$ 176,896	\$ 181,318	\$ 185,851	\$ 190,497	\$ 195,260	\$ -
38 Fringe Benefits	\$ 46,679	\$ 52,885	\$ 54,208	\$ 55,563	\$ 56,952	\$ 58,376	\$ 59,835	\$ 61,331	\$ 62,864	\$ 64,436	\$ -
39 Contracted Services [12]	\$ 85,455	\$ 87,591	\$ 89,734	\$ 75,759	\$ 61,040	\$ 45,579	\$ 46,625	\$ 30,623	\$ 26,807	\$ 27,402	\$ -
40 Overhead (Equip., Supl., Travel, etc.)	\$ 67,598	\$ 69,181	\$ 70,865	\$ 72,590	\$ 72,529	\$ 74,295	\$ 52,530	\$ 35,313	\$ 36,146	\$ 29,267	\$ -
41 Marketing Consultant	\$ 63,500	\$ 30,050	\$ 28,826	\$ 24,204	\$ 24,785	\$ 43,929	\$ 25,951	\$ 3,537	\$ 3,625	\$ 3,716	\$ -
42 Advertising and PR	\$ 132,000	\$ 106,000	\$ 90,975	\$ 50,950	\$ 44,050	\$ 116,200	\$ 103,875	\$ 40,850	\$ 26,200	\$ 22,800	\$ -
43 Broker's Commissions and Fees [13]	7.50%	\$ 4,779	\$ 16,795	\$ 101,608	\$ 66,891	\$ 38,027	\$ 33,671	\$ 104,954	\$ 34,518	\$ 93,251	\$ 42,067
44 Operating Reserve and Contingency	10.00%	\$ 54,140	\$ 52,276	\$ 60,028	\$ 51,433	\$ 46,996	\$ 54,914	\$ 57,489	\$ 39,202	\$ 44,139	\$ 38,495
45 Subtotal - Administration & Marketing	\$ 595,541	\$ 575,037	\$ 660,309	\$ 665,762	\$ 516,960	\$ 604,060	\$ 632,377	\$ 431,225	\$ 485,529	\$ 423,443	\$ -
46											
47 Total Operating and Maintenance Costs:	\$ 1,082,932	\$ 1,380,602	\$ 1,285,394	\$ 1,111,270	\$ 1,033,247	\$ 1,070,908	\$ 1,405,315	\$ 1,200,761	\$ 907,200	\$ 766,834	\$ -
48 Cash Flow Available for Debt Service	\$ 1,005,625	\$ 2,406,133	\$ 2,925,668	\$ 3,085,646	\$ 3,131,769	\$ 3,306,919	\$ 3,604,845	\$ (236,342)	\$ 260,616	\$ 277,656	\$ -
49											
50 INFRASTRUCTURE COSTS											
51 Infrastructure Improvements	\$ 801,122	\$ 1,870,282	\$ 5,175,806	\$ 2,506,471	\$ 2,301,739	\$ 825,844	\$ 923,234	\$ 1,441,092	\$ 1,892,469	\$ 442,880	\$ -
52											
53 Debt Service [14]	\$ 0	\$ 0	\$ 145,831	\$ 173,434	\$ 189,879	\$ 191,254	\$ 241,570	\$ 320,110	\$ 406,899	\$ 451,036	\$ -
54 Principal Payments	\$ -	\$ 0	\$ 160,415	\$ 182,757	\$ 191,307	\$ 182,376	\$ 227,205	\$ 300,312	\$ 378,175	\$ 382,346	\$ -
55 Interest Expense	\$ 0	\$ 0	\$ 306,246	\$ 356,191	\$ 381,184	\$ 373,630	\$ 468,775	\$ 620,422	\$ 785,074	\$ 813,382	\$ -
56 Subtotal - Debt Service	\$ 1,082,932	\$ 1,390,602	\$ 1,591,640	\$ 1,467,451	\$ 1,414,433	\$ 1,444,158	\$ 1,874,090	\$ 1,821,183	\$ 1,692,274	\$ 1,580,217	\$ -
57 Total Operating Expenses and Debt Service	\$ 1,005,624	\$ 2,406,133	\$ 2,619,422	\$ 2,725,455	\$ 2,750,585	\$ 1,025,289	\$ 136,077	\$ (866,764)	\$ (524,457)	\$ (633,726)	\$ -
58 Net Operating Income	\$ 1,005,624	\$ 3,410,757	\$ 6,030,179	\$ 8,769,634	\$ 11,510,217	\$ 12,535,807	\$ 12,671,577	\$ 11,818,813	\$ 11,291,355	\$ 10,755,634	\$ 10,
59 Cumulative Cash Flow	\$ (501,121)	\$ (1,570,282)	\$ (2,600,000)	\$ (2,000,000)	\$ (800,338)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
60 Less Cash Flow Applied To Capital Improvements [15]	\$ 504,503	\$ 1,339,354	\$ 1,458,776	\$ 2,188,231	\$ 2,938,814	\$ 3,463,766	\$ 3,509,836	\$ 2,744,072	\$ 2,219,614	\$ 1,683,889	\$ 1,
61 Net Cumulative Cash Flow	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
62											
63 Residual Value of Golf Course [2], and Leaseable											
64 Buildings @ 10% capitalization rate [3]											
65 Remaining Debt Service Obligations: (Years 16-Out)											
66 NET PROCEEDS FROM ASSET SALES											
67											
68 Cash Flow From Operations - Current Year	\$ 504,503	\$ 834,851	\$ 119,422	\$ 729,455	\$ 750,583	\$ 824,951	\$ 136,070	\$ (866,764)	\$ (524,457)	\$ (535,726)	\$ -
69											
70 DISCOUNTED CASH FLOWS @	15%	\$ 434,917	\$ 620,430	\$ 76,509	\$ 402,871	\$ 357,362	\$ 218,462	\$ 48,146	\$ (261,030)	\$ (137,908)	\$ (121,440)
71											
72 NET PRESENT VALUE OF CASH FLOWS		\$ 1,491,868									
73 YEAR-15 RESIDUAL AT 15% CAP RATE		(39,481)									
74 INDICATED BUSINESS PLAN VALUE		\$ 1,452,387									
75											
76 DISCOUNTED CASH FLOWS @	12%	\$ 450,450	\$ 665,638	\$ 85,002	\$ 463,582	\$ 425,901	\$ 285,957	\$ 61,851	\$ (348,829)	\$ (189,125)	\$ (172,489)
77											
78 NET PRESENT VALUE OF CASH FLOWS		\$ 1,487,698									
79 YEAR-15 RESIDUAL AT 15% CAP RATE		(66,833)									
80 INDICATED BUSINESS PLAN VALUE		\$ 1,420,865									
81											
82 [1] - Assumes sale proceeds from #333 and #312 of 5.9M over 5 years beginning in Year 2.											
83 [2] - Golf course to be expanded to 18 holes by year 6.											
84 [3] - Runnels Village to be rented to year 7 and then demolished, assuming demand for bus/light industrial in Parcel 1-C.											
85 [4] - Assumes Phase 2 and 3 buildings conveyed in Years 2 and 3.											
86 [5] - Assumes that 205 acres of timber will be harvested as part of site preparation for Parcels 1-A, 1-B, 1-C and 1-D.											
87 [6] - State of Texas to contribute 80% of local matching funds requirement.											
88 [7] - RRLRA to contribute 20% of matching funds from local sources.											
89 [8] - Assumes State matching and EDA grant funding will be only 70% of the EDC application to reflect the exclusion of utilities.											

[9] - Does not include grounds maintenance for lease-back properties maintained by Army.
[10] - Building maintenance expense expected to increase in Year 2 and 3 when Phase 2 and 3 property converge.
[11] - Assumes 10 percent county sheriff's department coverage. (Approximately \$154,000/yr. For 24 hr. police).
[12] - Contracted services include janitorial and maintenance services.
[13] - Assumes average of 7.5% commissions due to RRLRA coverage of marketing and advertising costs.
[14] - Assumes total capital improvements, less outside funding, will be financed through RRLRA revenue bond.
[15] - Assumes that excess cash flow in given years (as available) will be used to reduce the amount of bonding required.



§lands Mitigation Requirements

Year	Year	Year	Year	Year	Year	Year	Cumulative Forecast		
							5 Year Total	10 Year Total	15 year Total
2007	2008	2009	2010	2011	2012	2013			
\$ 343,807	\$ 347,245	\$ 350,718	\$ 354,225	\$ 357,767	\$ 318,666	\$ 295,990	368,927	1,682,751	3,360,116
\$ 158,905	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	6,843,611	9,873,714	9,873,714
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	2,500,000	2,500,000	2,500,000
\$ 467,406	\$ 485,346	\$ 516,745	\$ 501,874	\$ 566,385	\$ 586,782	\$ 607,669	612,761	2,554,841	5,334,296
\$ 10,414	\$ 10,593	\$ 10,773	\$ 10,952	\$ 11,132	\$ 11,311	\$ 11,491	326,762	474,027	628,686
\$ 111,668	\$ 115,246	\$ 117,950	\$ 119,301	\$ 122,299	\$ 124,745	\$ 127,240	1,190,581	2,065,759	2,677,496
\$ 1,092,200	\$ 958,430	\$ 985,786	\$ 986,952	\$ 1,057,583	\$ 1,041,505	\$ 1,042,390	11,652,542	19,151,092	24,276,306
\$ 75,617	\$ 86,062	\$ 86,062	\$ 86,062	\$ 86,062	\$ 86,062	\$ 86,062	249,743	658,507	988,817
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	307,500	307,500	307,500
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	910,000	910,000	910,000
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	227,500	227,500	227,500
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	360,000	400,000	400,000
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	4,850,000	4,850,000	4,850,000
\$ 75,617	\$ 86,062	\$ 86,062	\$ 86,062	\$ 86,062	\$ 86,062	\$ 86,062	6,604,743	6,893,807	7,383,817
\$ 1,167,817	\$ 1,044,492	\$ 1,081,848	\$ 1,079,014	\$ 1,143,845	\$ 1,127,557	\$ 1,128,452	18,457,385	28,114,899	31,669,125
\$ 182,760	\$ 187,329	\$ 96,006	\$ 49,203	\$ 50,433	\$ 51,694	\$ 52,986	788,449	1,680,507	1,990,829
\$ 24,000	\$ 24,500	\$ 25,000	\$ 25,500	\$ 26,000	\$ 26,500	\$ 27,000	221,250	372,750	502,750
101,863	27,212	27,758	28,323	28,878	29,434	29,989	496,506	1,430,793	1,576,185
\$ 25,232	\$ 25,758	\$ 26,283	\$ 26,809	\$ 27,335	\$ 27,860	\$ 28,386	961,576	1,234,448	1,372,121
\$ 31,222	\$ 32,002	\$ 32,802	\$ 33,622	\$ 34,463	\$ 35,324	\$ 36,207	134,692	267,085	456,503
\$ 18,492	\$ 18,877	\$ 19,263	\$ 19,648	\$ 20,033	\$ 20,418	\$ 20,804	80,903	171,437	271,603
\$ 4,716	\$ 1,234	\$ 1,234	\$ 1,234	\$ 1,234	\$ 1,234	\$ 1,234	59,681	113,853	120,023
\$ 33,386	\$ 26,480	\$ 17,506	\$ 12,984	\$ 13,265	\$ 13,549	\$ 13,836	246,775	471,945	543,068
\$ 421,671	\$ 343,392	\$ 248,862	\$ 197,323	\$ 201,541	\$ 206,013	\$ 210,442	2,989,835	5,763,821	6,825,102
\$ 190,497	\$ 195,260	\$ 127,416	\$ 130,602	\$ 133,867	\$ 137,214	\$ 140,644	806,927	1,736,749	2,406,492
\$ 62,884	\$ 64,436	\$ 42,047	\$ 43,099	\$ 44,176	\$ 45,280	\$ 46,412	266,287	573,129	794,143
\$ 26,807	\$ 27,402	\$ 23,315	\$ 23,826	\$ 24,346	\$ 24,870	\$ 25,401	399,579	576,615	696,375
\$ 36,146	\$ 29,267	\$ 29,947	\$ 30,643	\$ 31,356	\$ 28,022	\$ 28,668	332,703	580,054	728,690
\$ 3,625	\$ 3,716	\$ 3,809	\$ 3,124	\$ 3,202	\$ 3,282	\$ 3,364	171,165	251,923	268,704
\$ 26,200	\$ 22,800	\$ 17,150	\$ 6,250	\$ 3,188	\$ 2,920	\$ 3,313	423,975	735,900	769,051
\$ 93,251	\$ 42,067	\$ 26,460	\$ 26,725	\$ 26,992	\$ 24,061	\$ 22,312	228,100	534,761	563,311
\$ 44,139	\$ 38,495	\$ 27,014	\$ 26,427	\$ 26,713	\$ 26,598	\$ 27,011	264,873	499,112	632,875
\$ 485,529	\$ 423,443	\$ 297,158	\$ 290,698	\$ 293,840	\$ 292,577	\$ 297,125	2,913,609	5,490,243	6,961,641
\$ 907,200	\$ 766,835	\$ 843,020	\$ 488,021	\$ 495,481	\$ 496,990	\$ 507,557	5,903,444	11,254,064	13,796,743
\$ 260,616	\$ 277,656	\$ 638,828	\$ 684,993	\$ 648,164	\$ 628,977	\$ 620,985	12,553,841	14,980,835	17,882,382
\$ 1,592,469	\$ 442,880	\$ -	\$ 9,655	\$ 376,823	\$ 852,637	\$ -	\$ 12,055,419	\$ 16,880,658	\$ 17,919,773
\$ 406,899	\$ 431,036	\$ 431,036	\$ 431,562	\$ 452,099	\$ 482,218	\$ 482,218	\$ 809,145	\$ 2,100,013	\$ 4,379,146
\$ 378,175	\$ 382,346	\$ 358,639	\$ 335,511	\$ 334,365	\$ 342,630	\$ 316,108	\$ 834,479	\$ 2,004,892	\$ 3,692,146
\$ 788,074	\$ 813,385	\$ 789,675	\$ 767,073	\$ 788,464	\$ 824,848	\$ 798,326	\$ 1,043,623	\$ 4,104,905	\$ 8,071,292
\$ 1,692,274	\$ 1,580,217	\$ 1,332,695	\$ 1,255,094	\$ 1,281,945	\$ 1,323,438	\$ 1,305,894	\$ 6,947,067	\$ 15,356,970	\$ 21,856,036
\$ (824,457)	\$ (835,726)	\$ (280,847)	\$ (182,080)	\$ (138,300)	\$ (195,872)	\$ (177,442)	\$ 11,510,217	\$ 10,755,630	\$ 9,811,090
\$ 111,291,355	\$ 10,755,630	\$ 10,504,783	\$ 10,322,703	\$ 10,184,403	\$ 9,988,631	\$ 9,811,090	\$ 11,510,217	\$ 10,755,630	\$ 9,811,090
\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (8,571,403)	\$ (9,071,741)	\$ (9,071,741)
\$ 2,219,614	\$ 1,682,889	\$ 1,433,042	\$ 1,250,962	\$ 1,112,662	\$ 916,790	\$ 739,349			
							\$ 4,898,396		
							\$ 8,265,209	\$ -	\$ 8,265,209
							\$ (365,613)		
\$ (524,457)	\$ (835,726)	\$ (280,847)	\$ (182,080)	\$ (138,300)	\$ (195,872)	\$ (177,442)		\$ 5,265,209	
\$ (137,908)	\$ (121,440)	\$ (49,026)	\$ (30,674)	\$ (20,085)	\$ (24,822)	\$ (19,151)	\$ 3,880,530	5-Yr DCF Ave	\$ (28,690)
							\$ 418,814		\$ (191,268,26)
\$ (189,125)	\$ (172,489)	\$ (72,112)	\$ (46,736)	\$ (31,895)	\$ (40,079)	\$ (32,418)	\$ 5,174,039	5-Yr DCF Ave	\$ (44,606)
							\$ 945,278		\$ (297,386,34)

ained by Army
When Phase 2 and 3 property conveyed to RPLRA
mately \$154,000/yr. For 24 hr. police protection).

I marketing and advertising costs.
used through RPLRA revenue bonds.
sed to reduce the amount of bonding required.



Year
Total116
714
880
296
696
496
308817
560
000
580
000
000
617

125

82
756
105
583
333
000
102492
143
375
580
704
361
311
575
641

743

15

146
146
392
336
290
290
(41)

309

309
90
26
(34)

(3)

Table A.8. Scenario and sensitivity analysis.

Red River Army Depot

Scenario and Sensitivity Analysis Table - Range of Scenario NPV's

Scenario - RRLRA EDC Application Business Plan*	Years 1-5	Revenues Years 1-10	15-Year Total	Operations: Years 1-5
*Excludes utility systems				

Total Project Analysis View

15-Year analysis

\$ 13,858,127 \$ 24,398,160 \$ 37,585,608 \$ 5,903,444

15-Year analysis with USACERL developed reversion calculation

\$ 13,858,127 \$ 24,398,160 \$ 37,585,608 \$ 5,903,444

USACERL Developed Scenario - CERL1**	Years 1-5	Revenues Years 1-10	15-Year Total	Operations: Years 1-5
**Impact of CERL developed infrastructure costs and full wetlands mitigation				

Total Project Analysis View

15-Year analysis

\$ 18,555,653 \$ 26,364,239 \$ 31,918,765 \$ 5,903,444

15-Year analysis with USACERL developed reversion calculation

\$ 18,555,653 \$ 26,364,239 \$ 31,918,765 \$ 5,903,444

USACERL Developed Scenario - CERL2***	Years 1-5	Revenues Years 1-10	15-Year Total	Operations: Years 1-5
***Impact of CERL developed infrastructure costs and partial wetlands mitigation				

Total Project Analysis View

15-Year analysis

\$ 18,457,285 \$ 26,114,599 \$ 31,669,125 \$ 5,903,444

15-Year analysis with USACERL developed reversion calculation

\$ 18,457,285 \$ 26,114,599 \$ 31,669,125 \$ 5,903,444

(1)

Net Present Value

15 Years

Total	Operations and Maintenance Costs			Debt Service Costs			Total Cash Flows			Discount Rate
	Years 1-5	Years 1-10	15-Year Total	Years 1-5	Years 1-10	15-Year Total	Years 1-5	Years 1-10	15-Year Total	
08	\$ 5,903,444	\$ 11,254,064	\$ 13,786,743	\$ 4,057,743	\$ 12,748,868	\$ 21,035,752	\$ 3,896,940	\$ 395,228	\$ 2,763,113	\$ 1,556,861
08	\$ 5,903,444	\$ 11,254,064	\$ 13,786,643	\$ 4,057,743	\$ 12,748,868	\$ 21,035,753	\$ 3,896,940	\$ 395,228	\$ 2,763,212	\$ 1,704,790

Net Present Value
15 Years

Total	Operations and Maintenance Costs			Debt Service Costs			Total Cash Flows			Discount Rate
	Years 1-5	Years 1-10	15-Year Total	Years 1-5	Years 1-10	15-Year Total	Years 1-5	Years 1-10	15-Year Total	
65	\$ 5,903,444	\$ 11,254,064	\$ 13,786,743	\$ 1,141,420	\$ 4,582,260	\$ 8,890,466	\$ 11,510,789	\$ 10,527,915	\$ 9,241,556	\$ 1,375,817
65	\$ 5,903,444	\$ 11,254,064	\$ 13,786,743	\$ 1,141,420	\$ 4,582,260	\$ 8,890,466	\$ 11,510,789	\$ 10,527,915	\$ 9,241,556	\$ 1,296,149

Net Present Value
15 Years

Total	Operations and Maintenance Costs			Debt Service Costs			Total Cash Flows			Discount Rate
	Years 1-5	Years 1-10	15-Year Total	Years 1-5	Years 1-10	15-Year Total	Years 1-5	Years 1-10	15-Year Total	
25	\$ 5,903,444	\$ 11,254,064	\$ 13,786,743	\$ 1,043,623	\$ 4,104,905	\$ 8,071,292	\$ 11,510,218	\$ 10,755,630	\$ 9,811,090	\$ 1,491,868
25	\$ 5,903,444	\$ 11,254,064	\$ 13,786,743	\$ 1,043,623	\$ 4,104,905	\$ 8,071,292	\$ 11,510,218	\$ 10,755,630	\$ 9,811,090	\$ 1,452,387

Conclusion: Estimated RRLRA Business Plan Valuation

16%

\$ 1,375,817 \$ 1.

\$ 1,452,387 \$ 1.

\$ 1,375,817 \$ 1.

Reduced Capital Improvements and Full Wetlands Mitigation

Reduced Capital Improvements and Partial Wetlands Mitigation

USACERL's Estimation of Net Present Value

(2)

Net Present Value (NPV)**15 Years**

Total Cash Flows	Discount Rate	
-5	Years 1-10	15-Year Total

18% 13%

.940 \$ 395,228 \$ 2,763,113 \$ 1,556,861 \$ 1,704,790

.940 \$ 395,228 \$ 2,763,212 \$ 1,704,790 \$ 1,817,794

Net Present Value (NPV)**15 Years**

Total Cash Flows	Discount Rate	
-5	Years 1-10	15-Year Total

16% 12%

.789 \$ 10,527,915 \$ 9,241,556 \$ 1,375,817 \$ 1,321,038

.789 \$ 10,527,915 \$ 9,241,556 \$ 1,296,149 \$ 1,186,178

Net Present Value (NPV)**15 Years**

Total Cash Flows	Discount Rate	
-5	Years 1-10	15-Year Total

16% 12%

.218 \$ 10,755,630 \$ 9,811,090 \$ 1,491,868 \$ 1,487,698

.218 \$ 10,755,630 \$ 9,811,090 \$ 1,452,387 \$ 1,420,865

ss Plan Valuation	16%	12%
Netlands Mitigation	\$ 1,375,817	\$ 1,321,038
al Wetlands Mitigation	\$ 1,452,387	\$ 1,420,865
Value	\$ 1,375,817	\$ 1,420,865

(3)

Appendix B: Technical Support for Infrastructure Improvement Cost Estimates

Table B.1. SC&P-1 site clearance and preparation.

Action	Parcel	Size	UOM	Cost/Unit	Total Cost	Means Ref. No.	Book
<i>Clear伍oded Lots</i>							
Grub stumps & Remove - 22% @ 6"	1C	40	Acre	\$1,300	\$11,440	021-104-0150	Site 98 p. 37
	1D	152	Acre	\$1,300	\$43,472	021-104-0150	Site 98 p. 37
	1E	30	Acre	\$1,300	\$8,580	021-104-0150	Site 98 p. 37
Grub stumps & Remove - 63% @ 12"	1C	40	Acre	\$2,600	\$65,520	021-104-0250	Site 98 p. 37
	1D	152	Acre	\$2,600	\$248,976	021-104-0250	Site 98 p. 37
	1E	30	Acre	\$2,600	\$49,140	021-104-0250	Site 98 p. 37
Grub stumps & Remove - 15% @ 24"	1C	40	Acre	\$5,175	\$31,050	021-104-0350	Site 98 p. 37
	1D	152	Acre	\$5,175	\$117,990	021-104-0350	Site 98 p. 37
	1E	30	Acre	\$5,175	\$23,288	021-104-0350	Site 98 p. 37
Clear w/dozer & brush rake, medium brush to 4" dia.	1C	40	Acre	\$2,525	\$101,000	021-108-0550	Site 98 p. 37
	1D	152	Acre	\$2,525	\$383,800	021-108-0550	Site 98 p. 37
	1E	30	Acre	\$2,525	\$75,750	021-108-0550	Site 98 p. 37
Subtotal					\$1,160,006		
City cost index	79.7%						
Total					\$924,524		
Total with contingency of	10.0%				\$1,016,977		
Total with contingency of	30.0%				\$1,201,882		
<i>Rounded to</i>					\$1,017,000		
<i>Rounded to</i>					\$1,202,000		

Phasing of Site Clearance and Preparation

	Year	Size	UOM	Cost/Unit	Total Cost	Cost + 10%	Cost + 30%
	1998	30	Acre	\$4,165	\$124,936	\$137,429	\$162,416
	1999	25	Acre	\$4,289	\$107,236	\$117,960	\$139,407
	2000	60	Acre	\$4,418	\$265,089	\$291,597	\$344,615
	2005	50	Acre	\$5,122	\$256,092	\$281,701	\$332,920
	2010	40	Acre	\$5,938	\$237,505	\$261,255	\$308,756
Total		205			\$990,857	\$1,089,943	\$1,288,115
<i>Total Rounded to</i>					\$991,000	\$1,090,000	\$1,288,000
Inflation Rate per year	3.0%						

Assumptions

1. Tree removal contracted to an outside firm.
2. Revenue from timber sales included as income and not accounted for in this model.
3. Outside firm will include cutting and chipping of light trees in bid price.
4. Trees are 22% @ 6 inch diameter, 63% @ 12 inch diameter and 15% @ 24 inch diameter.
5. Brush is medium size up to 4 inch diameter.
6. Inflation rate is 3.0% per year.

Table B.2. SC&P-1 site clearance and preparation with revised B-30 crew.

Action	Parcel	Size	UOM	Cost/Unit	Total Cost	Means Ref. No.	Book
<i>Clear伍oded Lots</i>							
Grub stumps & Remove - 22% @ 6"	1C	40	Acre	\$1,090	\$9,592	021-104-0150	Site 98 p. 37
	1D	152	Acre	\$1,090	\$36,450	021-104-0150	Site 98 p. 37
	1E	30	Acre	\$1,090	\$7,194	021-104-0150	Site 98 p. 37
Grub stumps & Remove - 63% @ 12"	1C	40	Acre	\$2,180	\$54,936	021-104-0250	Site 98 p. 37
	1D	152	Acre	\$2,180	\$208,757	021-104-0250	Site 98 p. 37
	1E	30	Acre	\$2,180	\$41,202	021-104-0250	Site 98 p. 37
Grub stumps & Remove - 15% @ 24"	1C	40	Acre	\$4,360	\$26,160	021-104-0350	Site 98 p. 37
	1D	152	Acre	\$4,360	\$99,408	021-104-0350	Site 98 p. 37
	1E	30	Acre	\$4,360	\$19,620	021-104-0350	Site 98 p. 37
Clear w/doser & brush rake, medium brush to 4" dia.	1C	40	Acre	\$2,525	\$101,000	021-108-0550	Site 98 p. 37
	1D	152	Acre	\$2,525	\$383,800	021-108-0550	Site 98 p. 37
	1E	30	Acre	\$2,525	\$75,750	021-108-0550	Site 98 p. 37
Subtotal					\$1,063,868		
City cost index		79.7%					
Total					\$847,903		
Total with contingency of		10.0%			\$932,693		
Total with contingency of		30.0%			\$1,102,274		
<i>Rounded to</i>					\$933,000		
<i>Rounded to</i>					\$1,102,000		

Phasing of Site Clearance and Preparation

	Year	Size	UOM	Cost/Unit	Total Cost	Cost + 10%	Cost + 30%
	1998	30	Acre	\$3,819	\$114,582	\$126,040	\$148,956
	1999	25	Acre	\$3,934	\$98,349	\$108,184	\$127,854
	2000	60	Acre	\$4,052	\$243,119	\$267,431	\$316,055
	2005	50	Acre	\$4,697	\$234,868	\$258,355	\$305,328
	2010	40	Acre	\$5,446	\$217,821	\$239,603	\$283,167
<i>Total</i>		205			\$908,739	\$999,613	\$1,181,360
<i>Total Rounded to</i>					\$909,000	\$1,000,000	\$1,181,000
Inflation Rate per year	3.0%						

Assumptions

1. Tree removal contracted to an outside firm.
2. Revenue from timber sales included as income and not accounted for in this model.
3. Outside firm will include cutting and chipping of light trees in bid price.
4. Trees are 22% @ 6 inch dia., 63% @ 12 inch dia. & 15% @ 24 inch diameter.
5. Brush is medium size up to 4 inch diameter.
6. Inflation rate is 3.0% per year.

Table B.3. Construct access road from Highway 82 (located between Lots 2 and 3).

Action	Quantity	UOM	Cost/Unit	Total Cost	Means Ref. No.	Book
<i>Install road</i>						
Remove soil/excavate	1,580	CY	\$1.74	\$2,750	022-242-2000	98 Site p. 46
Remove top soil	1,580	CY	\$0.93	\$1,470	029-204-1400	98 Site p. 116
Grade soil	2,844	SY	\$0.72	\$2,048	025-122-1020	98 Site p. 69
Compaction of soil with riding vibrator	1,580	CY	\$0.82	\$1,296	022-304-0100	98 Site p. 53
Install and compact crushed stone base material	2,844	SY	\$19.15	\$54,471	022-308-0300	98 Site p. 53
Install 4" binder course	2,844	SY	\$6.95	\$19,769	025-104-0200	98 Site p. 67
Install 4" wearing course	2,844	SY	\$8.43	\$23,979	025-104-0340 + 025-104-0460	98 Site p. 68
Compaction of asphalt surface	632	CY	\$0.47	\$297	025-226-5020	
Total				\$106,079		
<i>Finish</i>						
Layout of pavement marking	3,200	LF	\$0.04	\$128	025-804-0790	98 Site p. 76
Install pavement marking (Thermoplastic paint)	3,200	LF	\$0.80	\$2,560	025-804-0710	98 Site p. 75
Total				\$2,688		
<i>Install new curb & gutter plus catch basin</i>						
Excavate for curb and gutter	116	CY	\$5.55	\$645	022-254-0500	98 Site p. 49
Install curb and gutter	1,600	LF	\$8.90	\$14,240	025-254-0448	98 Site p. 71
Install catch basins	16	EA	\$1,495.00	\$23,920	A12.3-710-5820	98 Site p. 377
Total				\$38,805		
SUBTOTAL				\$147,572		
City cost index	79.7%					
TOTAL				\$117,614		
TOTAL with contingency of:	10%			\$129,376		
TOTAL with contingency of:	30%			\$152,899		
<u>ROUNDED TO</u>				<u>\$129,000</u>		
<u>ROUNDED TO</u>				<u>\$153,000</u>		

Table B.4. Construct Parcel 1D distributor road (from intersection of Lots 1, 2, 5, and 6 to intersection of Lots 3, 4, 7, and 8).

Action	Quantity	UOM	Cost/Unit	Total Cost	Means Ref. No.	Book
<i>Install road</i>						
Remove soil/excavate	3,654	CY	\$1.74	\$6,359	022-242-2000	98 Site p. 46
Remove top soil	3,654	CY	\$0.93	\$3,399	029-204-1400	98 Site p. 116
Grade soil	6,578	SY	\$0.72	\$4,736	025-122-1020	98 Site p. 69
Compaction of soil with riding vibrator	3,654	CY	\$0.82	\$2,997	022-304-0100	98 Site p. 53
Install and compact crushed stone base material	6,578	SY	\$19.15	\$125,964	022-308-0300	98 Site p. 53
Install 4" binder course	6,578	SY	\$6.95	\$45,716	025-104-0200	98 Site p. 67
Install 4" wearing course	6,578	SY	\$8.43	\$55,451	025-104-0340 + 025-104-0460	98 Site p. 68
Compaction of asphalt surface	1,462	CY	\$0.47	\$687	025-226-5020 \$245,307	
Total						
<i>Finish</i>						
Layout of pavement marking	7,400	LF	\$0.04	\$296	025-804-0790	98 Site p. 76
Install pavement marking (Thermoplastic paint)	7,400	LF	\$0.80	\$5,920	025-804-0710	98 Site p. 75
Total					\$6,216	
<i>Install new curb & gutter plus catch basin</i>						
Excavate for curb and gutter	269	CY	\$5.55	\$1,491	022-254-0500	98 Site p. 49
Install curb and gutter	3,700	LF	\$8.90	\$32,930	025-254-0448	98 Site p. 71
Install catch basins	37	EA	\$1,495.00	\$55,315	A12.3-710-5820	98 Site p. 377
Total					\$89,736	
SUBTOTAL				\$341,259		
City cost index	79.7%			\$271,984		
TOTAL						
TOTAL with contingency of:	10%			\$299,182		
TOTAL with contingency of:	30%			\$353,579		
<i>ROUNDED TO</i>				\$299,000		
<i>ROUNDED TO</i>				\$354,000		

Table B.5. Construct Parcel 1C distributor road (along southern side of Highway 82, Lots 1, 2, and 3 to Park Drive).

Action	Quantity	UOM	Cost/Unit	Total Cost	Means Ref. No.	Book
<i>Install road</i>						
Remove soil/excavate	3,753	CY	\$1.74	\$6,530	022-242-2000	98 Site p. 46
Remove top soil	3,753	CY	\$0.93	\$3,490	029-204-1400	98 Site p. 116
Grade soil	6,756	SY	\$0.72	\$4,864	025-122-1020	98 Site p. 69
Compaction of soil with riding vibrator	3,753	CY	\$0.82	\$3,078	022-304-0100	98 Site p. 53
Install and compact crushed stone base material	6,756	SY	\$19.15	\$129,369	022-308-0300	98 Site p. 53
Install 4" binder course	6,756	SY	\$6.95	\$46,951	025-104-0200	98 Site p. 67
Install 4" wearing course	6,756	SY	\$8.43	\$56,949	025-104-0340 + 025-104-0460	98 Site p. 68
Compaction of asphalt surface	1,501	CY	\$0.47	\$706	025-226-5020	
Total						\$251,937
<i>Finish</i>						
Layout of pavement marking	7,600	LF	\$0.04	\$304	025-804-0790	98 Site p. 76
Install pavement marking (Thermoplastic paint)	7,600	LF	\$0.80	\$6,080	025-804-0710	98 Site p. 75
Total						\$6,384
<i>Install new curb & gutter plus catch basin</i>						
Excavate for curb and gutter	276	CY	\$5.55	\$1,531	022-254-0500	98 Site p. 49
Install curb and gutter	3,800	LF	\$8.90	\$33,820	025-254-0448	98 Site p. 71
Install catch basins	38	EA	\$1,495.00	\$56,810	A12.3-710-5820	98 Site p. 377
Total						\$92,161
SUBTOTAL				\$350,482		
City cost index	79.7%					
TOTAL				\$279,334		
TOTAL with contingency of:	10%			\$307,268		
TOTAL with contingency of:	30%			\$363,135		
ROUNDED TO				\$307,000		
ROUNDED TO				\$363,000		

Table B.6. Construction of distributor road in Parcel 1C (west of Runnels Village).

Action	Quantity	UOM	Cost/Unit	Total Cost	Means Ref. No.	Book
<i>Install road</i>						
Remove soil/excavate	1,679	CY	\$1.74	\$2,921	022-242-2000	98 Site p. 46
Remove top soil	1,679	CY	\$0.93	\$1,561	029-204-1400	98 Site p. 116
Grade soil	3,022	SY	\$0.72	\$2,176	025-122-1020	98 Site p. 69
Compaction of soil with riding vibrator	1,679	CY	\$0.82	\$1,377	022-304-0100	98 Site p. 53
Install and compact crushed stone base material	3,022	SY	\$19.15	\$57,876	022-308-0300	98 Site p. 53
Install 4" binder course	3,022	SY	\$6.95	\$21,004	025-104-0200	98 Site p. 67
Install 4" wearing course	3,022	SY	\$8.43	\$25,477	025-104-0340 + 025-104-0460	98 Site p. 68
Compaction of asphalt surface	672	CY	\$0.47	\$316	025-226-5020	
Total					\$112,709	
<i>Finish</i>						
Layout of pavement marking	3,400	LF	\$0.04	\$136	025-804-0790	98 Site p. 76
Install pavement marking (Thermoplastic paint)	3,400	LF	\$0.80	\$2,720	025-804-0710	98 Site p. 75
Total					\$2,856	
<i>Install new curb & gutter plus catch basin</i>						
Excavate for curb and gutter	123	CY	\$5.55	\$685	022-254-0500	98 Site p. 49
Install curb and gutter	1,700	LF	\$8.90	\$15,130	025-254-0448	98 Site p. 71
Install catch basins	17	EA	\$1,495.00	\$25,415	A12.3-710-5820	98 Site p. 377
Total					\$41,230	
SUBTOTAL				\$156,795		
City cost index	79.7%					
TOTAL				\$124,965		
TOTAL with contingency of:	10%			\$137,462		
TOTAL with contingency of:	30%			\$162,455		
<i>ROUNDED TO</i>				<u>\$137,000</u>		
<i>ROUNDED TO</i>				<u>\$162,000</u>		

Table B.7. Construction of distributor road in Parcel 3B (LRA-proposed Texas road and the east end of Arkansas Road connection).

Action	Quantity	UOM	Cost/Unit	Total Cost	Means Ref. No.	Book
<i>Install road</i>						
Remove soil/excavate	2,123	CY	\$1.74	\$3,695	022-242-2000	98 Site p. 46
Remove top soil	2,123	CY	\$0.93	\$1,975	029-204-1400	98 Site p. 116
Grade soil	3,822	SY	\$0.72	\$2,752	025-122-1020	98 Site p. 69
Compaction of soil with riding vibrator	2,123	CY	\$0.82	\$1,741	022-304-0100	98 Site p. 53
Install and compact crushed stone base material	3,822	SY	\$19.15	\$73,196	022-308-0300	98 Site p. 53
Install 4" binder course	3,822	SY	\$6.95	\$26,564	025-104-0200	98 Site p. 67
Install 4" wearing course	3,822	SY	\$8.43	\$32,221	025-104-0340 + 025-104-0460	98 Site p. 68
Compaction of asphalt surface	849	CY	\$0.47	\$399	025-226-5020	
Total					\$142,543	
<i>Finish</i>						
Layout of pavement marking	4,300	LF	\$0.04	\$172	025-804-0790	98 Site p. 76
Install pavement marking (Thermoplastic paint)	4,300	LF	\$0.80	\$3,440	025-804-0710	98 Site p. 75
Total					\$3,612	
<i>Install new curb & gutter plus catch basin</i>						
Excavate for curb and gutter	156	CY	\$5.55	\$866	022-254-0500	98 Site p. 49
Install curb and gutter	2,150	LF	\$8.90	\$19,135	025-254-0448	98 Site p. 71
Install catch basins	22	EA	\$1,495.00	\$32,143	A12.3-710-5820	98 Site p. 377
Total					\$52,144	
SUBTOTAL				\$198,299		
City cost index	79.7%					
TOTAL				\$158,044		
TOTAL with contingency of:	10%			\$173,849		
TOTAL with contingency of:	30%			\$205,458		
<i>ROUNDED TO</i>				<u>\$174,000</u>		
<i>ROUNDED TO</i>				<u>\$205,000</u>		

Table B.8. Reconstruct Texas Road (curb, gutters, and sidewalks) from main road to new military entrance.

Action	Quantity	UOM	Cost/unit	Total Cost	Means Ref. No.	Book
<i>Demolition of road and soil</i>						
Remove top soil	8,393	CY	\$0.93	\$7,805	029-204-1400	98 Site p. 119
<i>Road</i>						
Remove existing road	13,733	SY	\$6.10	\$83,773	020-554-1750	98 Site p. 28
Rubbish handling	2,289	CY	\$14.40	\$32,960	020-620-3080	98 Site p. 29
Haul debris to dump*	2,289	CY	\$12.80	\$29,298	020-620-5000	98 Site p. 29
Disposal fee for debris **	2,289	CY	\$6.00	\$13,733	020-612-0320	98 Site p. 29
Total				\$167,570		
<i>Install road (curb, gutter, and sidewalk optional)</i>						
<i>Road</i>						
Grade soil	27,467	SY	\$0.72	\$19,776	025-122-1020	98 Site p. 69
Install and compact 8" crushed stone base material	27,467	SY	\$13.05	\$358,440	022-308-0303	98 Site p. 54
Install 4" binder course	13,733	SY	\$6.95	\$95,447	025-104-0200	98 Site p. 67
Install 2" wearing course	13,733	SY	\$4.33	\$59,465	025-104-0380	98 Site p. 68
Compaction of 6" asphalt surface	2,289	CY	\$0.20	\$458	022-226-5020	98 Site p. 44
<i>Curb and gutter</i>						
Excavate for curb and gutter	748	CY	\$4.56	\$3,410	022-254-0090	98 Site p. 49
Install curb and gutter	10,300	LF	\$8.90	\$91,670	025-254-0448	98 Site p. 71
<i>Pavement markings</i>						
Layout of pavement marking	20,600	LF	\$0.04	\$824	025-804-0790	98 Site p. 76
Install pavement marking (Thermoplastic paint)	20,600	LF	\$0.80	\$16,480	025-804-0710	98 Site p. 75
Layout of directional arrows	50	SF	\$4.71	\$236	025-804-0760	98 Site p. 76
Install directional arrows	50	SF	\$4.71	\$236	025-804-0760	98 Site p. 76
Total				\$17,775		
SUBTOTAL				\$814,010		
City cost index	79.7%					
TOTAL				\$648,766		
TOTAL with contingency of:	10%		\$64,877	\$713,643		
TOTAL with contingency of:	30%		\$194,630	\$843,396		
ROUNDED TO				\$714,000		
ROUNDED TO				\$843,000		

* Haul distance calculated at 20 miles per trip.

** Means provides cost per ton, reported cost is based on cubic yards.

Table B.9. Reconstruct Arkansas Road (curb, gutters, and sidewalks) from main road to end.

Action	Quantity	UOM	Cost/unit	Total Cost	Means Ref. No.	Book
<i>Demolition of road and soil</i>						
Remove top soil	3,422	CY	\$0.93	\$3,183	029-204-1400	98 Site p. 119
<i>Road</i>						
Remove existing road	5,600	SY	\$6.10	\$34,160	020-554-1750	98 Site p. 28
Rubbish handling	933	CY	\$14.40	\$13,440	020-620-3080	98 Site p. 29
Haul debris to dump*	933	CY	\$12.80	\$11,947	020-620-5000	98 Site p. 29
Disposal fee for debris **	933	CY	\$6.00	\$5,600	020-612-0320	98 Site p. 29
Total				\$68,329		
<i>Install road (curb, gutter, and sidewalk optional)</i>						
<i>Road</i>						
Grade soil	11,200	SY	\$0.72	\$8,064	025-122-1020	98 Site p. 69
Install and compact 8" crushed stone base material	11,200	SY	\$13.05	\$146,160	022-308-0303	98 Site p. 54
Install 4" binder course	5,600	SY	\$6.95	\$38,920	025-104-0200	98 Site p. 67
Install 2" wearing course	5,600	SY	\$4.33	\$24,248	025-104-0380	98 Site p. 68
Compaction of 6" asphalt surface	933	CY	\$0.20	\$187	022-226-5020	98 Site p. 44
<i>Curb and gutter</i>						
Excavate for curb and gutter	305	CY	\$4.56	\$1,390	022-254-0090	98 Site p. 49
Install curb and gutter	4,200	LF	\$8.90	\$37,380	025-254-0448	98 Site p. 71
<i>Pavement markings</i>						
Layout of pavement marking	8,400	LF	\$0.04	\$336	025-804-0790	98 Site p. 76
Install pavement marking (Thermoplastic paint)	8,400	LF	\$0.80	\$6,720	025-804-0710	98 Site p. 75
Layout of directional arrows	0	SF	\$4.71	\$0	025-804-0760	98 Site p. 76
Install directional arrows	0	SF	\$4.71	\$0	025-804-0760	98 Site p. 76
Total				\$7,056		
SUBTOTAL				\$331,734		
City cost index	79.7%					
TOTAL				\$264,392		
TOTAL with contingency of:	10%		\$26,439	\$290,832		
TOTAL with contingency of:	30%		\$79,318	\$343,710		
<u>ROUNDED TO</u>				<u>\$291,000</u>		
<u>ROUNDED TO</u>				<u>\$344,000</u>		

* Haul distance calculated at 20 miles per trip.

** Means provides cost per ton; reported cost is based on cubic yards.

Table B.10. Reconstruct Main Drive (curb, gutters, and sidewalks) from main entrance to Texas Road.

Action	Quantity	UOM	Cost/unit	Total Cost	Means Ref. No.	Book
<i>Demolition of road and soil</i>						
Remove top soil	3,585	CY	\$0.93	\$3,334	029-204-1400	98 Site p. 119
<i>Road</i>						
Remove existing road	5,867	SY	\$6.10	\$35,787	020-554-1750	98 Site p. 28
Rubbish handling	978	CY	\$14.40	\$14,080	020-620-3080	98 Site p. 29
Haul debris to dump*	978	CY	\$12.80	\$12,516	020-620-5000	98 Site p. 29
Disposal fee for debris **	978	CY	\$6.00	\$5,867	020-612-0320	98 Site p. 29
Total						\$71,583
<i>Install road (curb and gutter, and sidewalk optional)</i>						
<i>Road</i>						
Grade soil	11,733	SY	\$0.72	\$8,448	025-122-1020	98 Site p. 69
Install and compact 8" crushed stone base material	11,733	SY	\$13.05	\$153,120	022-308-0303	98 Site p. 54
Install 4" binder course	5,867	SY	\$6.95	\$40,773	025-104-0200	98 Site p. 67
Install 2" wearing course	5,867	SY	\$4.33	\$25,403	025-104-0380	98 Site p. 68
Compaction of 6" asphalt surface	978	CY	\$0.20	\$196	022-226-5020	98 Site p. 44
<i>Curb and gutter</i>						
Excavate for curb and gutter	160	CY	\$4.56	\$728	022-254-0090	98 Site p. 49
Install curb and gutter	2,200	LF	\$8.90	\$19,580	025-254-0448	98 Site p. 71
<i>Pavement markings</i>						
Layout of pavement marking	4,400	LF	\$0.04	\$176	025-804-0790	98 Site p. 76
Install pavement marking (Thermoplastic paint)	4,400	LF	\$0.80	\$3,520	025-804-0710	98 Site p. 75
Layout of directional arrows	25	SF	\$4.71	\$118	025-804-0760	98 Site p. 76
Install directional arrows	25	SF	\$4.71	\$118	025-804-0760	98 Site p. 76
Total						\$3,932
SUBTOTAL				\$323,762	\$323,762	= \$0
City cost index	79.7%				\$0	check
TOTAL				\$258,039		
TOTAL with contingency of:	10%		\$25,804	\$283,843		
TOTAL with contingency of:	30%		\$77,412	\$335,450		
ROUNDED TO				\$284,000		
ROUNDED TO				\$335,000		

* Haul distance calculated at 20 miles per trip.

** Means provides cost per ton, reported cost is based on cubic yards.

Table B.11. Reconstruct Main Drive (curb, gutters, and sidewalks) from Texas Road to Arkansas Road.

Action	Quantity	UOM	Cost/unit	Total Cost	Means Ref. No.	Book
<i>Demolition of road and soil</i>						
Remove top soil	1,385	CY	\$0.93	\$1,288	029-204-1400	98 Site p. 119
<i>Road</i>						
Remove existing road	2,267	SY	\$6.10	\$13,827	020-554-1750	98 Site p. 28
Rubbish handling	378	CY	\$14.40	\$5,440	020-620-3080	98 Site p. 29
Haul debris to dump*	378	CY	\$12.80	\$4,836	020-620-5000	98 Site p. 29
Disposal fee for debris **	378	CY	\$6.00	\$2,267	020-612-0320	98 Site p. 29
Total				\$27,657		
<i>Install road (curb, gutter, and sidewalk optional)</i>						
<i>Road</i>						
Grade soil	4,533	SY	\$0.72	\$3,264	025-122-1020	98 Site p. 69
Install and compact 8" crushed stone base material	4,533	SY	\$13.05	\$59,160	022-308-0303	98 Site p. 54
Install 4" binder course	2,267	SY	\$6.95	\$15,753	025-104-0200	98 Site p. 67
Install 2" wearing course	2,267	SY	\$4.33	\$9,815	025-104-0380	98 Site p. 68
Compaction of 6" asphalt surface	378	CY	\$0.20	\$76	022-226-5020	98 Site p. 44
<i>Curb and gutter</i>						
Excavate for curb and gutter	123	CY	\$4.56	\$563	022-254-0090	98 Site p. 49
Install curb and gutter	1,700	LF	\$8.90	\$15,130	025-254-0448	98 Site p. 71
<i>Pavement markings</i>						
Layout of pavement marking	3,400	LF	\$0.04	\$136	025-804-0790	98 Site p. 76
Install pavement marking (Thermoplastic paint)	3,400	LF	\$0.80	\$2,720	025-804-0710	98 Site p. 75
Layout of directional arrows	0	SF	\$4.71	\$0	025-804-0760	98 Site p. 76
Install directional arrows	0	SF	\$4.71	\$0	025-804-0760	98 Site p. 76
Total				\$2,856		
SUBTOTAL				\$134,273	\$134,273	= \$0 check
City cost index	79.7%				\$0	
TOTAL				\$107,016		
TOTAL with contingency of:	10%		\$10,702	\$117,718		
TOTAL with contingency of:	30%		\$32,105	\$139,121		
ROUNDED TO				<u>\$118,000</u>		
ROUNDED TO				<u>\$139,000</u>		

* Haul distance calculated at 20 miles per trip.

** Means provides cost per ton, reported cost is based on cubic yards.

Table B.12. Reconstruct Park Drive (curb, gutters, and sidewalks) from Main Drive to Golf Course maintenance facility.

Action	Quantity	UOM	Cost/unit	Total Cost	Means Ref. No.	Book
<i>Demolition of road and soil</i>						
Remove top soil	3,259	CY	\$0.93	\$3,031	029-204-1400	98 Site p. 119
<i>Road</i>						
Remove existing road	5,333	SY	\$6.10	\$32,533	020-554-1750	98 Site p. 28
Rubbish handling	889	CY	\$14.40	\$12,800	020-620-3080	98 Site p. 29
Haul debris to dump*	889	CY	\$12.80	\$11,378	020-620-5000	98 Site p. 29
Disposal fee for debris **	889	CY	\$6.00	\$5,333	020-612-0320	98 Site p. 29
Total				\$65,076		
<i>Install road (curb, gutter, and sidewalk optional)</i>						
<i>Road</i>						
Grade soil	10,667	SY	\$0.72	\$7,680	025-122-1020	98 Site p. 69
Install and compact 8" crushed stone base material	10,667	SY	\$13.05	\$139,200	022-308-0303	98 Site p. 54
Install 4" binder course	5,333	SY	\$6.95	\$37,067	025-104-0200	98 Site p. 67
Install 2" wearing course	5,333	SY	\$4.33	\$23,093	025-104-0380	98 Site p. 68
Compaction of 6" asphalt surface	889	CY	\$0.20	\$178	022-226-5020	98 Site p. 44
<i>Curb and gutter</i>						
Excavate for curb and gutter	290	CY	\$4.56	\$1,324	022-254-0090	98 Site p. 49
Install curb and gutter	4,000	LF	\$8.90	\$35,600	025-254-0448	98 Site p. 71
<i>Pavement markings</i>						
Layout of pavement marking	8,000	LF	\$0.04	\$320	025-804-0790	98 Site p. 76
Install pavement marking (Thermoplastic paint)	8,000	LF	\$0.80	\$6,400	025-804-0710	98 Site p. 75
Layout of directional arrows	0	SF	\$4.71	\$0	025-804-0760	98 Site p. 76
Install directional arrows	0	SF	\$4.71	\$0	025-804-0760	98 Site p. 76
Total				\$6,720		
SUBTOTAL				\$315,938		
City cost index	79.7%					
TOTAL				\$251,802		
TOTAL with contingency of:	10%		\$25,180	\$276,982		
TOTAL with contingency of:	30%		\$75,541	\$327,343		
<u>ROUNDED TO</u>				<u>\$277,000</u>		
<u>ROUNDED TO</u>				<u>\$277,000</u>		

* Haul distance calculated at 20 miles per trip.

** Means provides cost per ton, reported cost is based on cubic yards.

Table B.13. Reconstruct Runnels Village Road (curb, gutters, and sidewalks) from Park Drive to Park Drive.

Action	Quantity	UOM	Cost/unit	Total Cost	Means Ref. No.	Book
<i>Demolition of road and soil</i>						
Remove top soil	1,630	CY	\$0.93	\$1,516	029-204-1400	98 Site p. 119
<i>Road</i>						
Remove existing road	2,667	SY	\$6.10	\$16,267	020-554-1750	98 Site p. 28
Rubbish handling	444	CY	\$14.40	\$6,400	020-620-3080	98 Site p. 29
Haul debris to dump*	444	CY	\$12.80	\$5,689	020-620-5000	98 Site p. 29
Disposal fee for debris **	444	CY	\$6.00	\$2,667	020-612-0320	98 Site p. 29
Total				\$32,538		
<i>Install road (curb, gutter, and sidewalk optional)</i>						
<i>Road</i>						
Grade soil	5,333	SY	\$0.72	\$3,840	025-122-1020	98 Site p. 69
Install and compact 8" crushed stone base material	5,333	SY	\$13.05	\$69,600	022-308-0303	98 Site p. 54
Install 4" binder course	2,667	SY	\$6.95	\$18,533	025-104-0200	98 Site p. 67
Install 2" wearing course	2,667	SY	\$4.33	\$11,547	025-104-0380	98 Site p. 68
Compaction of 6" asphalt surface	444	CY	\$0.20	\$89	022-226-5020	98 Site p. 44
<i>Curb and gutter</i>						
Excavate for curb and gutter	145	CY	\$4.56	\$662	022-254-0090	98 Site p. 49
Install curb and gutter	2,000	LF	\$8.90	\$17,800	025-254-0448	98 Site p. 71
<i>Pavement markings</i>						
Layout of pavement marking	4,000	LF	\$0.04	\$160	025-804-0790	98 Site p. 76
Install pavement marking (Thermoplastic paint)	4,000	LF	\$0.80	\$3,200	025-804-0710	98 Site p. 75
Layout of directional arrows	0	SF	\$4.71	\$0	025-804-0760	98 Site p. 76
Install directional arrows	0	SF	\$4.71	\$0	025-804-0760	98 Site p. 76
Total				\$3,360		
SUBTOTAL				\$157,969		
City cost index	79.7%					
TOTAL				\$125,901		
TOTAL with contingency of:	10%		\$12,590	\$138,491		
TOTAL with contingency of:	30%		\$37,770	\$163,671		
ROUNDED TO				<u>\$138,000</u>		
ROUNDED TO				<u>\$164,000</u>		

* Haul distance calculated at 20 miles per trip.

** Means provides cost per ton, reported cost is based on cubic yards.

Table B.14. Reconstruct North Patrol Road (curb, gutters, and sidewalks) from eastern side of Lot 3 Parcel 1C.

Action	Quantity	UOM	Cost/unit	Total Cost	Means Ref. No.	Book
<i>Demolition of road and soil</i>						
Remove top soil	978	CY	\$0.93	\$909	029-204-1400	98 Site p. 119
<i>Road</i>						
Remove existing road	1,600	SY	\$6.10	\$9,760	020-554-1750	98 Site p. 28
Rubbish handling	267	CY	\$14.40	\$3,840	020-620-3080	98 Site p. 29
Haul debris to dump*	267	CY	\$12.80	\$3,413	020-620-5000	98 Site p. 29
Disposal fee for debris **	267	CY	\$6.00	\$1,600	020-612-0320	98 Site p. 29
Total				\$19,523		
<i>Install road (curb, gutter, and sidewalk optional)</i>						
<i>Road</i>						
Grade soil	3,200	SY	\$0.72	\$2,304	025-122-1020	98 Site p. 69
Install and compact 8" crushed stone base material	3,200	SY	\$13.05	\$41,760	022-308-0303	98 Site p. 54
Install 4" binder course	1,600	SY	\$6.95	\$11,120	025-104-0200	98 Site p. 67
Install 2" wearing course	1,600	SY	\$4.33	\$6,928	025-104-0380	98 Site p. 68
Compaction of 6" asphalt surface	267	CY	\$0.20	\$53	022-226-5020	98 Site p. 44
<i>Curb and gutter</i>						
Excavate for curb and gutter	87	CY	\$4.56	\$397	022-254-0090	98 Site p. 49
Install curb and gutter	1,200	LF	\$8.90	\$10,680	025-254-0448	98 Site p. 71
<i>Pavement markings</i>						
Layout of pavement marking	2,400	LF	\$0.04	\$96	025-804-0790	98 Site p. 76
Install pavement marking (Thermoplastic paint)	2,400	LF	\$0.80	\$1,920	025-804-0710	98 Site p. 75
Layout of directional arrows	0	SF	\$4.71	\$0	025-804-0760	98 Site p. 76
Install directional arrows	0	SF	\$4.71	\$0	025-804-0760	98 Site p. 76
Total				\$2,016		
SUBTOTAL				\$94,781		
City cost index	79.7%					
TOTAL				\$75,541		
TOTAL with contingency of:	10%		\$7,554	\$83,095		
TOTAL with contingency of:	30%		\$22,662	\$98,203		
ROUNDED TO				\$83,000		
ROUNDED TO				\$98,000		

* Haul distance calculated at 20 miles per trip.

** Means provides cost per ton, reported cost is based on cubic yards.

Table B.15. Reconstruct road that services Buildings 312 and 333.

Action	Quantity	UOM	Cost/unit	Total Cost	Means Ref. No.	Book
<i>Demolition of road and soil</i>						
Remove top soil	6,233	CY	\$0.93	\$5,797	029-204-1400	98 Site p. 119
<i>Road</i>						
Remove existing road	10,200	SY	\$6.10	\$62,220	020-554-1750	98 Site p. 28
Rubbish handling	1,700	CY	\$14.40	\$24,480	020-620-3080	98 Site p. 29
Haul debris to dump*	1,700	CY	\$12.80	\$21,760	020-620-5000	98 Site p. 29
Disposal fee for debris **	1,700	CY	\$6.00	\$10,200	020-612-0320	98 Site p. 29
Total						\$124,457
<i>Install road (curb, gutter, and sidewalk optional)</i>						
<i>Road</i>						
Grade soil	20,400	SY	\$0.72	\$14,688	025-122-1020	98 Site p. 69
Install and compact 8" crushed stone base material	20,400	SY	\$13.05	\$266,220	022-308-0303	98 Site p. 54
Install 4" binder course	10,200	SY	\$6.95	\$70,890	025-104-0200	98 Site p. 67
Install 2" wearing course	10,200	SY	\$4.33	\$44,166	025-104-0380	98 Site p. 68
Compaction of 6" asphalt surface	1,700	CY	\$0.20	\$340	022-226-5020	98 Site p. 44
<i>Curb and gutter</i>						
Excavate for curb and gutter (not required)	0	CY	\$4.56	\$0	022-254-0090	98 Site p. 49
Install curb and gutter (not required)	0	LF	\$8.90	\$0	025-254-0448	98 Site p. 71
SUBTOTAL				\$520,761	\$520,761	= \$0 check
City cost index	79.7%				\$0	
TOTAL				\$415,047		
TOTAL with contingency of:	10%		\$41,505	\$456,551		
TOTAL with contingency of:	30%		\$124,514	\$539,560		
ROUNDED TO				\$457,000		
ROUNDED TO				\$540,000		

* Haul distance calculated at 20 miles per trip.

** Means provides cost per ton, reported cost is based on cubic yards.

Table B.16. Slurry seal miscellaneous roads in main administration area.

Action	Quantity	UOM	Cost/unit	Total Cost	Means Ref. No.	Book
<i>Chip seal existing road</i>						
Sweep and remove debris	240	MSF	\$2.22	\$533	029-710-6420	98 Site p. 125
Repair potholes & damages (10% of existing)	2,667	SY	\$13.05	\$34,800	029-710-5913	98 Site p. 125
Install chip seal	26,667	SY	\$3.40	\$90,667	025-458-2350	98 Site p. 74
Total					\$125,999	
SUBTOTAL				\$125,999	\$125,999	= \$0
City cost index	79.7%				\$0	check
TOTAL				\$100,422		
TOTAL with contingency of:	10%			\$110,464		
TOTAL with contingency of:	30%			\$130,548		
<u>ROUNDED TO</u>				<u>\$110,000</u>		
<u>ROUNDED TO</u>				<u>\$131,000</u>		

Table B.18. Cost summary table for golf course upgrade and expansion (including clubhouse renovation).

No.	Project Description	Golf Course Cost	
		10% Contingency	30% Contingency
clubhouse upgrade construct	Golf Course Upgrade and Expansion Cost		
	Upgrading and furnish Clubhouse	\$129,345	\$152,589
	Golf Course Infrastructure and Equipment*		
	Install Maintenance Shed	\$152,655	\$180,411
	Renovation of existing 9 Holes	\$869,000	\$1,027,000
	Golf Course Construction (New 9 Holes)	\$1,271,000	\$1,502,000
<u>Total Golf Course Upgrade and Expansion Cost</u>		<u>\$2,422,000</u>	<u>\$2,862,000</u>
LRA Proposed Costs		\$2,350,000	

* Golf Course Infrastructure and Equipment is found in the upgrade and construction costs.

Table B.19. Upgrade Building 77 for Golf Clubhouse, furnish clubhouse, and install maintenance shed.

Action	Quantity	UOM	Cost/unit	Total Cost	Means Ref. No.	Book
<i>Install entrance sign</i>						
Install sign	200	SF	\$20.50	\$4,100	028-412-2000	97 Site p. 109
Excavate for sign	19	CY	\$4.48	\$84	022-254-0060	
Concrete for sign	19	CY	\$520.00	\$9,802	033-130-1520	
Total						\$13,986
<i>Update clubhouse</i>						
Update Building 77	4,000	SF	\$5.00	\$20,000		LRA Assumed Cost
Total						\$20,000
<i>Install maintenance shed</i>						
Construct maintenance shed	2,500	SF	\$69.65	\$174,125	M.700	95 Square foot p. 212
Total						\$174,125
<i>Furniture, Fixtures and Equipment</i>						
Office furniture	2	EA	\$415.00	\$830	A11.1-500-2400	95 Square Foot p. 399
Kitchen Equipment - dish washer	1	EA	\$16,300.00	\$16,300	A11.1-200-3840	96 Square Foot p. 397
Kitchen Equipment - fryers	1	EA	\$4,304.00	\$4,304	A11.1-200-4040	96 Square Foot p. 397
Kitchen Equipment - range	1	EA	\$3,958.00	\$3,958	A11.1-200-4140	96 Square Foot p. 397
Kitchen Equipment - range hood	1	EA	\$19,345.00	\$19,345	A11.1-200-4240	96 Square Foot p. 397
Restaurant furniture booths	13	EA	\$3,030.00	\$37,875	A11.1-500-3140	96 Square Foot p. 397
Restaurant furniture bar stools	5	LF	\$208.00	\$1,040	A11.1-500-7000	96 Square Foot p. 397
Restaurant furniture - bar	20	LF	\$263.00	\$5,260	M.100	95 Square Foot p. 92
Walk in fridge	36	SF	\$115.45	\$4,156	A11.1-700-7300	96 Square Foot p. 403
Equipment lockers	50	EA	\$209.00	\$10,450	M.100	95 Square Foot p. 92
Total						\$103,518
<i>Practice range equipment</i>						
Extra sets of clubs	25	EA	\$385.00	\$9,625	114-801-0010	95 Facilities p. 330
Total						\$9,625
SUBTOTAL				\$321,254	\$321,254	= \$0
City cost index	79.7%				\$0	check
TOTAL				\$256,040		
TOTAL with contingency of:	10%		\$25,604	\$281,644		
TOTAL with contingency of:	30%		\$76,812	\$332,852		
<u>ROUNDED TO</u>				<u>\$282,000</u>		
<u>ROUNDED TO</u>				<u>\$333,000</u>		

Table B.20. Upgrade existing 9-hole golf course.

Action	Quantity	UOM	Cost/unit	Total Cost	Means Ref. No.	Book
<i>Clearing</i>						
Stripping	66,718	CY	\$0.60	\$40,031	021-144-0020	98 Site p. 38
<i>Total</i>						\$40,031
<i>Sediment and erosion</i>						
Slope/erosion control	80,061	SY	\$0.76	\$60,847	022-704-0100	98 Site p. 56
<i>Total</i>						\$60,847
<i>Replace topsoil</i>						
Install topsoil	33,359	CY	\$1.60	\$53,374	022-286-0020	98 Site p. 53 going backwards
<i>Total</i>						\$53,374
<i>Rough shaping</i>						
Shape land	200,154	SY	\$0.14	\$28,022	025-122-3300	98 Site p. 69
<i>Total</i>						\$28,022
<i>Fine grading</i>						
Fine grade area	200,154	SY	\$0.14	\$28,022	025-122-3300	98 Site p. 69
<i>Total</i>						\$28,022
<i>Greens construction</i>						
Scarify subsoil	63	MSF	\$4.32	\$272	029-204-3200	98 Site p. 120
Rake topsoil	63	MSF	\$32.50	\$2,048	029-204-0100	98 Site p. 119
Spread topsoil	2,333	CY	\$16.60	\$38,733	029-204-5300	98 Site p. 120
Spread limestone	63	MSF	\$13.65	\$860	029-204-4250	98 Site p. 120
Spread manure	63	MSF	\$286.00	\$18,018	029-204-4450	98 Site p. 120
Mix planting soil	2,333	CY	\$35.50	\$82,833	029-208-2000	98 Site p. 121
Till topsoil	7,000	SY	\$0.45	\$3,150	029-204-6250	98 Site p. 120
Fine grade area	7,000	SY	\$0.14	\$980	025-122-3300	98 Site p. 69
Install straw mulch	63	MSF	\$29.00	\$1,827	029-516-0700	98 Site p. 123
<i>Total</i>						\$148,721
<i>Golf course drainage</i>						
Cut drainage swales	15,012	LF	\$0.20	\$3,002	022-702-0010	98 Site p. 55
Slope/erosion control	50,038	SY	\$0.76	\$38,029	022-704-0100	98 Site p. 56
<i>Total</i>						\$41,031
<i>Tee Construction</i>						
Scarify subsoil	24	MSF	\$4.32	\$102	029-204-3200	98 Site p. 120
Rake topsoil	24	MSF	\$32.50	\$770	029-204-0100	98 Site p. 119
Spread topsoil	878	CY	\$16.60	\$14,573	029-204-5300	98 Site p. 120
Spread limestone	24	MSF	\$13.65	\$324	029-204-4250	98 Site p. 120
Spread manure	24	MSF	\$286.00	\$6,779	029-204-4450	98 Site p. 120
Mix planting soil	878	CY	\$35.50	\$31,164	029-208-2000	98 Site p. 121
Till topsoil	2,634	SY	\$0.45	\$1,185	029-204-6250	98 Site p. 120
Fine grade area	2,634	SY	\$0.14	\$369	025-122-3300	98 Site p. 69
Install straw mulch	24	MSF	\$29.00	\$687	029-516-0700	98 Site p. 123
<i>Total</i>						\$55,953
<i>Irrigation with pump station</i>						
Install irrigation system	1,801,382	SF	\$0.13	\$234,180	A12.7-910-9200	98 Site p. 413
<i>Total</i>						\$234,180

Action	Quantity	UOM	Cost/unit	Total Cost	Means Ref. No.	Book
<i>Soil amendments</i>						
Install peat on greens	63	MSF	\$115.00	\$7,245	029-516-0550	98 Site p. 123
Install peat on tees	24	MSF	\$115.00	\$2,726	029-516-0550	98 Site p. 123
Total				\$9,971		
<i>Cart Path</i>						
Construct cart path	11,500	LF	\$6.70	\$77,050	A12.7-120-2160	98 Site p. 389
Total				\$77,050		
<i>Seedbed preparation</i>						
Prepare soil on greens	7,000	SY	\$6.44	\$45,080	A12.7-604-1200	97 R&R p. 478
Prepare soil on tees	2,634	SY	\$6.44	\$16,960	A12.7-604-1200	97 R&R p. 478
Total				\$62,040		
<i>Grassing (Fairways, Roughs)</i>						
Install Grass on fairways	1,715	MSF	\$22.00	\$37,723	029-308-4900	98 Site p. 122
Total				\$37,723		
<i>Grassing (Tees and Greens)</i>						
Install sod for greens	63	MSF	\$645.00	\$40,635	029-316-0700	98 Site p. 122
Install sod for tees	24	MSF	\$645.00	\$15,288	029-316-0700	98 Site p. 122
Total				\$55,923		
<i>Sod (for practice putting greens)</i>						
Install sod for practice putting green	90	MSF	\$645.00	\$58,050	029-316-0700	98 Site p. 122
Total				\$58,050		
SUBTOTAL				\$990,938		
City cost index	80%					
TOTAL				\$789,777		
TOTAL with contingency of:	10%		\$78,978	\$868,755		
TOTAL with contingency of:	30%		\$236,933	\$1,026,710		
<u>ROUNDED TO</u>				<u>\$869,000</u>		
<u>ROUNDED TO</u>				<u>\$1,027,000</u>		

Table B.21. Construct a 9-hole low to medium range type golf course.

Action	Quantity	UOM	Cost/unit	Total Cost	Means Ref. No.	Book
<i>Mobilization</i>						
Mobilization (included)						
Total				\$0		
<i>Layout/Staking</i>						
Surveying golf course/buildings	45	AC	\$278.00	\$12,626	013-306-0010	98 Site p. 8
Total				\$12,626		
<i>Clearing</i>						
Clear and grub	45	AC	\$375.00	\$17,031	021-108-1040	98 Site p. 38
Stripping	73,271	CY	\$0.60	\$43,963	021-144-0020	98 Site p. 38
Total				\$60,994		
<i>Sediment and erosion</i>						
Slope/erosion control	87,925	SY	\$0.76	\$66,823	022-704-0100	98 Site p. 56
Total				\$66,823		
<i>Replace topsoil</i>						
Install topsoil	36,635	CY	\$1.60	\$58,617	022-286-0020	98 Site p. 53 going backwards
Total				\$58,617		
<i>Earthwork</i>						
Excavation	73,271	CY	\$2.31	\$169,256	022-246-0100	98 Site p. 47
Total				\$169,256		
<i>Rough shaping</i>						
Shape land	219,813	SY	\$0.14	\$30,774	025-122-3300	98 Site p. 69
Total				\$30,774		
<i>Fine grading</i>						
Fine grade area	219,813	SY	\$0.14	\$30,774	025-122-3300	98 Site p. 69
Total				\$30,774		
<i>Bunker construction</i>						
Excavate sand traps	2,442	CY	\$2.04	\$4,982	022-238-0200	98 Site p. 46
Construct sand traps	2,442	CY	\$16.60	\$40,543	022-212-0400	97 R&R p. 38
Total				\$45,526		
<i>Greens construction</i>						
Remove rock and debris	63	MSF	\$11.95	\$753	029-204-1900	98 Site p. 120
Root raking	63	MSF	\$34.00	\$2,142	029-204-2100	98 Site p. 120
Scarfify subsoil	63	MSF	\$4.32	\$272	029-204-3200	98 Site p. 120
Rake topsoil	63	MSF	\$32.50	\$2,048	029-204-0100	98 Site p. 119
Spread topsoil	2,333	CY	\$16.60	\$38,733	029-204-5300	98 Site p. 120
Spread limestone	63	MSF	\$13.65	\$860	029-204-4250	98 Site p. 120
Spread manure	63	MSF	\$286.00	\$18,018	029-204-4450	98 Site p. 120
Mix planting soil	2,333	CY	\$35.50	\$82,833	029-208-2000	98 Site p. 121
Till topsoil	7,000	SY	\$0.45	\$3,150	029-204-6250	98 Site p. 120
Fine grade area	7,000	SY	\$0.14	\$980	025-122-3300	98 Site p. 69
Install straw mulch	63	MSF	\$29.00	\$1,827	029-516-0700	98 Site p. 123
Total				\$151,616		
<i>Golf course drainage</i>						
Cut drainage swales	16,486	LF	\$0.20	\$3,297	022-702-0010	98 Site p. 55
Slope/erosion control	54,953	SY	\$0.76	\$41,764	022-704-0100	98 Site p. 56
Total				\$45,062		
<i>Tee Construction</i>						
Remove rock and debris	24	MSF	\$11.95	\$281	029-204-1900	98 Site p. 120
Root raking	24	MSF	\$34.00	\$800	029-204-2100	98 Site p. 120
Scarfify subsoil	24	MSF	\$4.32	\$102	029-204-3200	98 Site p. 120
Rake topsoil	24	MSF	\$32.50	\$764	029-204-0100	98 Site p. 119
Spread topsoil	871	CY	\$16.60	\$14,457	029-204-5300	98 Site p. 120

Action	Quantity	UOM	Cost/unit	Total Cost	Means Ref. No.	Book
Spread limestone	24	MSF	\$13.65	\$321	029-204-4250	98 Site p. 120
Spread manure	24	MSF	\$286.00	\$6,725	029-204-4450	98 Site p. 120
Mix planting soil	871	CY	\$35.50	\$30,918	029-208-2000	98 Site p. 121
Till topsoil	2,613	SY	\$0.45	\$1,176	029-204-6250	98 Site p. 120
Fine grade area	2,613	SY	\$0.14	\$366	025-122-3300	98 Site p. 69
Install straw mulch	24	MSF	\$29.00	\$682	029-516-0700	98 Site p. 123
Total				\$56,592		
<i>Irrigation with pump station</i>						
Install irrigation system	1,978,315	SF	\$0.13	\$257,181	A12.7-910-9200	98 Site p. 413
Total				\$257,181		
<i>Pump station and wetwell</i>						
Install a pump station	2	EA	\$54,500.00	\$109,000	027-174-0020	98 Site p. 105
Install wet well	2	EA	\$12,600.00	\$25,200	027-174-1500	98 Site p. 106
Total				\$134,200		
<i>Soil amendments</i>						
Install peat on greens	63	MSF	\$115.00	\$7,245	029-516-0550	98 Site p. 123
Install peat on tees	24	MSF	\$115.00	\$2,704	029-516-0550	98 Site p. 123
Total				\$9,949		
<i>Cart Path</i>						
Construct cart path	13,400	LF	\$6.70	\$89,780	A12.7-120-2160	98 Site p. 389
Total				\$89,780		
<i>Seedbed preparation</i>						
Prepare soil on greens	7,000	SY	\$6.44	\$45,080	A12.7-604-1200	97 R&R p. 478
Prepare soil on tees	2,613	SY	\$6.44	\$16,826	A12.7-604-1200	97 R&R p. 478
Total				\$61,906		
<i>Grassing (Fairways, Roughs)</i>						
Install Grass on fairways	1,892	MSF	\$22.00	\$41,620	029-308-4900	98 Site p. 122
Total				\$41,620		
<i>Grassing (Tees and Greens)</i>						
Install sod for greens	63	MSF	\$645.00	\$40,635	029-316-0700	98 Site p. 122
Install sod for tees	24	MSF	\$645.00	\$15,167	029-316-0700	98 Site p. 122
Total				\$55,802		
<i>Sod (for practice putting greens)</i>						
Install sod for practice putting green	90	MSF	\$645.00	\$58,050	029-316-0700	98 Site p. 122
Total				\$58,050		
<i>Landscaping</i>						
Install trees	90	EA	\$71.00	\$6,390	A12.7-421-1620 clay soil	98 Site p. 407
Install bushes	90	EA	\$72.55	\$6,530	A12.7-421-1220 + 22 for bush	98 Site p. 407
Total				\$12,920		
SUBTOTAL				\$1,450,066		= \$0
City cost index	80%			\$0		check
TOTAL				\$1,155,702		
TOTAL with contingency of:	10%		\$115,570	\$1,271,273		
TOTAL with contingency of:	30%		\$346,711	\$1,502,413		
ROUNDED TO				\$1,271,000		
ROUNDED TO				\$1,502,000		

Table B.22. Install signage for site entrance.

Table B.23. Building demolition.

Building #	Contains	Contains	Unit Cost *	Cost	Unit Cost **	Cost
	Asbestos	Lead Paint	\$/sf		\$/sf	
2			\$7.00	\$476.00	\$7.00	\$476.00
3			\$7.00	\$1,519.00	\$7.00	\$1,519.00
S713			\$6.50	\$26,884.00	\$6.50	\$26,884.00
S727			\$6.50	\$1,820.00	\$6.50	\$1,820.00
112			\$7.00	\$222,635.00	\$7.00	\$222,635.00
219			\$6.50	\$1,560.00	\$6.50	\$1,560.00
S223			\$6.50	\$6,383.00	\$6.50	\$6,383.00
256			\$6.50	\$1,638.00	\$6.50	\$1,638.00
281			\$6.50	\$1,625.00	\$6.50	\$1,625.00
285			\$6.50	\$4,212.00	\$6.50	\$4,212.00
125	Y	Y	\$9.50	\$10,212.50	\$11.50	\$12,362.50
162		Y	\$9.50	\$3,800.00	\$11.50	\$4,600.00
S167	Y	Y	\$9.50	\$2,660.00	\$11.50	\$3,220.00
S177			\$6.50	\$3,120.00	\$6.50	\$3,120.00
702	Y	Y	\$5.00	\$25,600.00	\$7.00	\$35,840.00
704	Y	Y	\$5.00	\$50,560.00	\$7.00	\$70,784.00
705		Y	\$5.00	\$21,230.00	\$7.00	\$29,722.00
707	Y	Y	\$5.00	\$21,230.00	\$7.00	\$29,722.00
708	Y	Y	\$5.00	\$9,175.00	\$7.00	\$12,845.00
710		Y	\$5.00	\$18,900.00	\$7.00	\$26,460.00
715	Y	Y	\$5.00	\$21,895.00	\$7.00	\$30,653.00
717	Y	Y	\$5.00	\$21,895.00	\$7.00	\$30,653.00
S161			\$7.00	\$135,716.00	\$7.00	\$135,716.00
S179		Y	\$9.50	\$2,660.00	\$11.50	\$3,220.00
S180		Y	\$9.50	\$5,130.00	\$11.50	\$6,210.00
183		Y	\$9.50	\$6,080.00	\$11.50	\$7,360.00
T80			\$6.50	\$5,200.00	\$6.50	\$5,200.00
S87		Y	\$9.50	\$2,280.00	\$11.50	\$2,760.00
S56	Y	Y	\$10.00	\$27,650.00	\$12.00	\$33,180.00
S163			\$7.00	\$4,788.00	\$7.00	\$4,788.00
S251			\$7.00	\$3,780.00	\$7.00	\$3,780.00
168			\$6.50	\$2,827.50	\$6.50	\$2,827.50
222			\$7.00	\$2,352.00	\$7.00	\$2,352.00
S169			\$6.50	\$1,820.00	\$6.50	\$1,820.00
138			\$6.50	\$1,040.00	\$6.50	\$1,040.00
Total Cost for Demolition			\$680,353.00			\$768,987.00
City Correction			\$525,427.66			\$593,878.53
10% Overhead			\$577,970.42	\$653,266.38		
30% Overhead			\$683,055.95	\$772,042.08		

* Demolition unit costs provide by Dick Wood with The Galbreath Co.

** Environmental Issues: Add \$5.00/sf

Distribution

Chief of Engineers 20314-1000
ATTN: CEHEC-IM-LH (2)
ATTN: CEHEC-IM-LP (2)
ATTN: CERD-L
ATTN: CERE-C (3)

ACSIM 20310
ATTN: DAIM-BO (3)

U.S. Army Engineer District,
Fort Worth
ATTN: CESWF (5)

Defense Technical Info Center 22060-6218
ATTN: DTIC-O (2)

18

6/99